

PSYCHOLOGICAL ABSTRACTS

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GENERAL

2846. Adams, G. *The rise and fall of psychology.* *Atl. Mo.*, 1934, 153, 82-92.—R. R. Willoughby (Clark).

2847. [Anon.] *Krise der Psychologie. Psychologie der Krise.* (The crisis of psychology. The psychology of crisis.) Berlin: Jugend-Bücherstube Adolf Günther, 1932. Pp. 141. RM. 2.80.—R. R. Willoughby (Clark).

2848. Avery, G. T. *Proceedings of the Rocky Mountain Branch of the American Psychological Association, Laramie, Wyoming, December 1-2, 1933.* *Psychol. Bull.*, 1934, 31, 144-145.—J. F. Dashiell (North Carolina).

2849. Colyer, F. *A new non-polarizing A. C. psychogalvanometer.* *Aust. J. Psychol.*, 1932, 10, 144-148.—The author describes and discusses the advantages of a non-polarizing A. C. psychogalvanometer which has given satisfactory service in the laboratory. A diagram of the electrical circuit is included in the article.—(Courtesy *Année psychol.*)

2850. D'Agostino, V. *Sulla zoopsicologia di Plutarco.* (Concerning the zoopsychology of Plutarch.) *Scritti onore Kiesow*, 1933, 69-74.—Plutarch believed that the difference between man and animals was quantitative and not qualitative. For the ancients, and also for Plutarch, the problem of the soul of animals was a moral problem rather than one of science, involving as it did the rights which men had over animals.—R. Calabresi (Rome).

2851. Donnan, F. G. *Activities of life and the second law of thermodynamics.* *Nature*, 1934, 133, 99.—A reply to the statement of Sir James Jeans to the effect that living organisms must possess some method of evading the second law of thermodynamics. The author holds that a finite amount of organization in living organisms may be purchased only at the expense of a greater amount of disorganization in a series of inter-related spontaneous actions.—E. H. Kemp (Clark).

2852. Dumas, G., & Ombredane, A. *Nouveau traité de psychologie.* Vol. III. Paris: Alcan, 1933. Pp. 462. 100 fr.—In the first two volumes of this new treatise we find a discussion of the relationships existing between stimulation, whether conscious or not, and reflexes, tonus, super-elementary reflexes, and conditioned reflexes, and the relationships between psychic stimulation and secretions. Then comes a discussion of the sensory and affective elements of mental life, representations, and images. The third volume deals with sensory-motor functions. Ombredane discusses equilibrium, orientation, and language, and Dumas deals with the expression of emotion and mimicry. Full bibliographies are given

after each of the eight chapters in this volume.—*Math. H. Piéron* (Sorbonne).

2853. Garvey, C. R. *A device for measuring the subcostal angle.* *J. Gen. Psychol.*, 1933, 9, 481-484.—The angle formed by the lines of the lower costal margins has been used as a datum of constitutional anatomy, and the present instrument was devised to check the relation between morphology and certain psychological "types."—H. Cason (Wisconsin).

2854. Goldstein, W. *Die historische Entwicklung der psychisch-physischen Problem in der Antike.* (The historical development of the psychophysical problem in antiquity.) Breslau: Marcus, 1932. Pp. 40.—R. R. Willoughby (Clark).

2855. Goodenough, F. L. *Trends in modern psychology.* *Psychol. Bull.*, 1933, 30, 658.—Abstract.—J. F. Dashiell (North Carolina).

2856. Goodenough, F. L. *Trends in modern psychology.* *Psychol. Bull.*, 1934, 31, 81-97.—The proportionate numbers of publication titles listed year by year in the *Psychological Index* since its founding in 1894, supplemented with data from *Psychological Abstracts* and from programs of the American Psychological Association, are presented in several graphs. Divisions of the psychological field thus compared include: sensation and perception, educational, industrial and personnel, plant and animal behavior, nervous system, childhood and adolescence, mental tests.—J. F. Dashiell (North Carolina).

2857. Goudge, T. A. *Some realist theories of illusion.* *Monist*, 1934, 44, 108-125.—Every realist theory of knowledge has difficulty explaining the nature of illusory experience. This paper considers the realistic theories of Alexander in England and the views of the neo-realists and critical realists of America as to the nature of illusion. The principal objections against each type of theory are stated and suggestions given toward a permanent solution of the problem. Alexander's view that illusion is due to a reversal of the causal relations in perception and the neo-realist claim that illusion is the perception of subsistent rather than existent forms of reality break down in the attempt to explain concrete instances, while critical realism if consistent is unable to distinguish between true and false perceptions, since it is never directly acquainted with physical objects but merely with sensations. The author, proceeding on realist assumptions, suggests that bare sensation has no cognitive value, unless unified with other components, and that illusory sensa are at times spontaneously generated without the possibility of integration with the cognitive experience as a whole. Illusion then has no epistemological significance.—C. M. Diserens (Cincinnati).

2858. Hunter, W. S., & others. Standards for the Ph.D. degree in psychology. *Psychol. Bull.*, 1934, 31, 67-72.—A report is made by the American Psychological Association's Committee on the Ph.D. Degree in Psychology, based upon returns from 22 institutions.—J. F. Dashiell (North Carolina).

2859. Köhler, W. *Psychologische Probleme*. Berlin: Springer, 1933. Pp. 252. RM. 14.—This book was originally intended as an introduction to psychology for the American student and lay public. The treatment is somewhat simplified. It is organized around three problems: psychophysical relationships, the question most sharply in focus; the search for totalities; and laying the foundations for the author's forms of world structure, a problem everywhere discernible although not discussed explicitly. The chief positive elements in connection with the discussion of the first problem are the rejection of behaviorism; the refusal to confuse psychology with other disciplines (e.g. Darwinism or sociology); and opposition to the unlimited claims of the biological viewpoint and the carefree treatment of psychological problems.—F. Fischer (Wiesloch).

2860. Margineanu, N. *Problema evolutiei*. (Problem of evolution.) Cluj, Rumania: Societatea de Maine, 1931. Pp. 82. Lei 60.—The first part deals with the origins of the idea of evolution, which is traced to Darwin and Spencer. Rather important for historical sciences have been Hegel's philosophical ideas. The introduction of the idea of evolution in psychology facilitated the organic connection between human and animal psychology and contributed to the elimination of the old philosophical dualism of mind-body. Because it was hardly possible to speak about such a dualism in the field of animal psychology people have realized that it is not absolutely necessary to keep it in human psychology. Darwin's ideas also opened the way for American behaviorism. The second part discusses the controversy between mechanism and finalism. Spencer's mechanistic conception of evolution is presented, followed by a discussion of different conceptions which are reactions against Spencer. Special credit is given to Bergson. However, Bergson is not a finalist; to his mind finalism is nothing but an inverse mechanism. The idea of determinism is still kept. What Bergson combats is just this idea of determinism, by claiming that evolution is always creative. New qualities appear, which cannot be explained from the old ones. Thus he opened the way for the doctrine of emergent evolution. The third part of the book presents the main ideas of this doctrine as advocated by Lloyd Morgan, S. Alexander, Whitehead in England; Jennings, Sellars in America. Simmel, in Germany, is considered to be to some extent a forerunner. The last chapter includes a critical appreciation of emergent evolution and its implications.—N. Margineanu (Chicago).

2861. Neifakh, A. [An improvement of Piorkowski's attention tester.] *Psikhotekh. i psikhofiziol. truda*, 1931, 4, 369-371.—The author proposes several modifications of Piorkowski's apparatus, using

as criteria the critical remarks of Verwoerd (*J. Appl. Psychol.*, 1928). The most important modification, from the practical point of view, is one which permits the test to be administered simultaneously to several subjects by a single operator.—(Courtesy *Année psychol.*)

2862. Nojima, C. *Koyo shinrigaku hattatsushi*. (Elements of history of psychology.) Gifu: Taishushobo, 1933. Pp. 214. Y. 1.50.—An historical survey on the development of psychology from Thales to Wundt is followed by descriptions of several tendencies in recent psychology, such as the biological (including functionalism, behaviorism, etc.), the metaphysical, the structural, the phenomenological, the Gestalt, and other schools. The last chapter is devoted to an outline of several branches of present-day psychology.—R. Kuroda (Keijo).

2863. Onojima, U. *Saikin shinri-gaku gaisetsu*. (Outline of recent psychology.) (2 vols.) Tokyo: Chubunkan, 1933. Pp. 700.—The author aims at writing a textbook as well as a reference book. In between data gathered from recent psychological literature he inserts many of his own views and ideas to suggest his position among recent psychologists. There is a chapter on nerve mechanisms and an introduction to Lewin's theory of drive, stress, vectors, and equilibrium.—J. G. Yoshioka (Yale).

2864. Paterson, D. G. *Proceedings of the forty-first annual meeting of the American Psychological Association, Incorporated, Chicago, Illinois, September, 7, 8, 9, 11, 12, 13, 1933*. *Psychol. Bull.*, 1933, 30, 631-741.—Transactions of business, reports of committees, and abstracts of papers.—J. F. Dashiell (North Carolina).

2865. Pepper, S. C. *The conceptual framework of Tolman's purposive behaviorism*. *Psychol. Rev.*, 1934, 41, 108-134.—A discussion of the revolutionary nature of concepts advanced in Tolman's book *Purposive Behavior*. The author points out the distinction between mechanistic and contextualistic concepts, identifying Tolman's with the latter, which are based on the assumption that parts are meaningless except as parts of a whole. Tolman's theories of immanent determinants and of initiating causes, behavior adjustments and capacities are shown to be contextualistic in nature. His avoidance of the secondary qualities and introspective approach are his inheritance from behaviorism, but are not essential aspects of his system.—A. G. Bills (Chicago).

2866. Poffenberger, A. T. *Division of Anthropology and Psychology; a history of the National Research Council, 1919-1933*. *Rep. & Cir. Ser. Nat. Res. Coun.*, 1933, No. 106.—The Division has throughout its history been guided by the principles set forth in the objectives adopted at its first meeting in 1919: "(1) To coordinate research activities now in progress or in prospect; (2) to encourage the development of research personnel, by a systematic search for promising material, by furnishing to possible research students information about facilities and opportunities, and by fostering the establishment of fellowships and facilities for training; (3) to foster

a small number of selected research projects; and (4) to act in an advisory capacity on research projects within our field, when such counsel is requested by duly constituted agencies." The Division's interest in special topics led to the appointing of committees on each of the following: intelligence testing, state archeological surveys, child development, the psychology of the highway, nystagmus (committee on vestibular research), research for the deaf and hard of hearing, psychiatric investigations, the experimental study of human emotions, and others. The Division was instrumental in the founding of *Psychological Abstracts*. Facts and figures concerning the awarding of fellowships are presented, and the names of the thirteen past chairmen are published.—*R. W. Gilbert* (New York University).

2867. Ranschburg, P. *Behaviorismus und Psychologie*. (Behaviorism and psychology.) *Arch. f. d. ges. Psychol.*, 1932, 86, 307-406.—By means of a critical analysis of the views of Watson, Hunter and Lashley the author presents an attack on behaviorism.—*J. J. Carlson* (Aurora-on-Cayuga).

2868. Sternegger, B. *Sätze der Psychologie. Eine Zusammenfassung der grundlegenden Resultate psychologische Forschung*. (Tenets of psychology. A summary of the fundamental results of psychological investigations.) Munich: Hueber, 1933. Pp. 123. RM. 2.00.—*R. R. Willoughby* (Clark).

2869. Todoranu, D. *Miscarea psihologica la Cluj*. (Psychology at Cluj.) *Societatea de Maine*, 1930, 7, 320-324.—A brief history of the Institute of Psychology, University of Cluj, and a summary of the work done. The Institute was founded in 1922 by Prof. Fl. Stefanescu Goanga, a former student of Wundt. It is the first in Rumania. At present it has a staff of 6 persons plus many research fellows. The branches most represented are: general psychology (presentation and verification of various conceptions of contemporary psychology), applied psychology (vocational guidance and scientific management of labor), abnormal psychology (especially feeble-mindedness and delinquency) and social psychology (studies of personality and character). Still to be organized are sections for child and animal psychology. The publications edited by the Institute have three main aims: (1) to introduce in the country the new directions of contemporary psychology, (2) to adapt the various techniques for measurement of intelligence and abilities, and (3) to introduce new experimental researches. Between four and six volumes of about 200 pages each are published every year. The publications started in 1929. Owing to the fact that the Institute has the largest staff, the greatest number of publications and the most complete laboratory and library in the country, it centralizes greatly the psychological movement in Rumania.—*N. Margineanu* (Chicago).

2870. Uhrbrock, R. S. *June Etta Downey, July 13, 1875-October 11, 1932*. *J. Gen. Psychol.*, 1933, 9, 351-364.—Description of the life, professional career, and psychological and literary contributions

of the late Professor Downey. There is a photograph of Miss Downey, a discussion of her work on temperamental differences, and a bibliography of her writings.—*H. Cason* (Wisconsin).

2871. Williams, D. C. *The inductive argument for subjectivism*. *Monist*, 1934, 44, 90-107.—The author examines a number of alleged inductive arguments for subjectivism, phenomenalism, or the conception of external reality as of a mental nature, and rejects them all. The prevalence of perceptual error and relativity is unexplained by subjectivism, but yields to the detailed physical and physiological explanations of the realist. Nor does the capacity of the mind to create error imply a capacity to create its total content. Idealist applications of Mill's method of agreement fail to show that conscious observation is an invariable concomitant of existence. They are merely consistent with subjectivism. Idealists and scientific positivists leaning toward subjectivism ignore the supreme principle of induction, viz., that no fact is evidence against a hypothesis which explains that fact. Subjectivism accords with the law of parsimony only by attaching an arbitrary and probably incorrect meaning to that law. The author gives an extended account of the basic principles of the law of parsimony and shows that idealistic hypotheses are really antagonistic to the law. He concludes therefore that subjectivism is formally possible, but improbable.—*C. M. Diserens* (Cincinnati).

2872. Wilson, M. O. *Communication*. *Psychol. Bull.*, 1933, 30, 817-818.—An adaptation of the Dewey decimal system of library classification has proved useful for inventorying laboratory apparatus and furniture.—*J. F. Dashiell* (North Carolina).

2873. Woodworth, R. S. *Howard Crosby Warren* (Associate Editor, *Psychological Review*, 1901-1909; Editor, 1916-1934). *Psychol. Rev.*, 1934, 41, 105-107.—*A. G. Bills* (Chicago).

2874. Woodworth, R. S. *Edward Lee Thorndike: president of the American Association for the Advancement of Science*. *Scient. Mo.*, 1934, 38, 187-189.—*J. F. Dashiell* (North Carolina).

[See also abstracts 3145, 3202, 3226.]

SENSATION AND PERCEPTION

2875. Akishige, Y. *Experimentelle Untersuchungen über die Struktur des Wahrnehmungsraumes*. (Experimental investigations of the structure of perceptual space.) *Psychol. Inst. d. Kais. Kyushu Univ. z. Fukuoka*, 1933. Pp. 22.—Four separate studies are included. The first study, "An experimental investigation of the so-called Delboeuf illusion," yielded a number of laws governing the perception of objects under different conditions. The Delboeuf illusion and the Fischer phenomenon are explained as instances of the operation of these laws. The second investigation was a contribution to the theory of constancy of size, and was unique in that its data were derived from a study of a man who had been born with only one eye. The conclusion was reached that the degree to which the normal human

being possesses size constancy does not depend simply upon binocular parallax and convergence, but that the constancy phenomenon depends entirely upon spatial organization. In the third article a relation was found to exist between the muscle of the pinna and the constancy of direction of sound. The last investigation concerned the appearance and disappearance of objects which suddenly enter or go out of the field of vision.—*E. H. Kemp* (Clark).

2876. [Anon.] **Disorientation and vertigo.** *Nature*, 1934, 133, 34-35.—This is a report of the joint discussion of Sections I and J of the British Association, held on September 7, 1933. J. T. MacCurdy held that the muscle and deep pressure senses are most important factors in maintaining posture, while the labyrinthine sensations are least important. Vision supplements the reflex mechanism. He further suggested a theory as to the physiological mechanism of nausea and vomiting. T. G. Maitland suggested that vertigo is an "emotive and hallucinatory reaction" aroused when false orientation is set up in the muscles in response to reflex excitation from the semi-circular canals, when those canals encounter movements other than those to which they are accustomed. E. D. Dickson ranked sight and deep sensibility above labyrinthine activity in importance for orientation in flying. R. J. Bartlett considered insufficiency of available oxygen in the blood supply to the brain as an immediate cause of disorientation and vertigo. R. S. Creed stated that false sensations of movement or position, compensatory movements jeopardizing balance, and consciousness of the falsity of the movements give rise to feelings of uncertainty and instability, whence arises the mental distress.—*E. H. Kemp* (Clark).

2877. **Berger, C.** *Zum Problem der Sehschärfe. Beiträge vom Standpunkt der Wahrnehmungspsychologie.* (The problem of visual acuity. Contributions from the standpoint of perceptual psychology.) Berlin: Martin & Jonske, 1932. Pp. 51.—*R. R. Willoughby* (Clark).

2878. **Botti, L.** *Osservazioni di ottica psicologica.* (Observations on psychological optics.) *Scritti onore Kiesow*, 1933, 27-28.—*R. Calabresi* (Rome).

2879. **Bunge, E.** *Ueber bitemporale Gesichtsfelddefekte.* (On bitemporal defects of the visual field.) *Arch. f. Augenhk.*, 1932, 106, 60-98.—The author deals with the actual state of research concerning lesions of the chiasma. 50 cases are presented. One of these cases renders the theory of the double representation of the macula very improbable. It demands in every case a line of vertical separation for the two eyes, an exactly symmetrical lesion of the chiasma, which is very rare. Among the cases analyzed those where the macula is spared are quite rare, and acuity is not always in relation to the macular preservation.—(Courtesy *Annee psychol.*)

2880. **Calabresi, R.** *Contributo allo studio della illusione di Poggendorf nella percezione tattilo-cinetica.* (Contribution to the study of the Poggendorf illusion in tactile-kinesthetic perception.) *Scritti onore Kiesow*, 1933, 75-88.—The author used 8

figures in specially arranged experiments on the Poggendorf illusion in tactile-kinesthetic fields. The more important conclusions are as follows: (1) There is a noticeable difference in the optical and tactile-kinesthetic forms of the illusion, with a distinct tendency for the illusion to disappear or be reversed in the tactile-kinesthetic field. (2) There is a constant parallelism between the given manner of the appearance of the tactile-kinesthetic perception and the reversal of the illusion. (3) Especially in the tactile-kinesthetic perception, the positive as well as the negative illusion is to be connected with the selective and unifying tendency of perception and with the appearance of a motor Einstellung. (4) No differences were observed between blind and seeing subjects.—*F. Banisconi* (Rome).

2881. **Disher, D. R.** *The effect of pressure magnitude on cutaneous localization.* *J. Gen. Psychol.*, 1933, 9, 390-404.—Five different pressures were used in investigating an area 10 mm. square for accuracy of localization on the backs of each of five left hands and on each of five left forearms. 60 localizations of each pressure were made in each case. The results do not support Franz's contention that light pressures are more accurately localized than heavier pressures. For the back of the hand they support Ponzo in his conclusion that the pressure variable is not influential in determining the magnitude of error. For the volar surface of the forearm they are statistically in favor of medium pressures rather than light pressures for accuracy of localization; they emphasize individual differences, and suggest several problems.—*H. Cason* (Wisconsin).

2882. **Falkenberg, B.** *Farbenkonstanz und bunte Beleuchtung.* (Color constancy and brilliant illumination.) Berlin: Hermann, 1932. Pp. 76.—*R. R. Willoughby* (Clark).

2883. **Ferree, C. E., & Rand, G.** *Color contrast of the second order.* *J. Gen. Psychol.*, 1933, 9, 450-452.—The authors show that a contrast excitation may not only give rise to an after-image but may also induce a second contrast excitation. The special sensitizing condition of this phenomenon was a quick change from medium (daylight) to low illumination, and the contrast is observed while the illumination is changing.—*H. Cason* (Wisconsin).

2884. **Gahagan, L.** *Visual dominance-acuity relationships.* *J. Gen. Psychol.*, 1933, 9, 455-459.—Determinations of ocular dominance and visual acuity were made upon 100 persons, and dominance and acuity were found to be independent visual phenomena.—*H. Cason* (Wisconsin).

2885. **Gault, R. H.** *The sensitivity of the fingertip to vibrations at various frequency levels.* *Psychol. Bull.*, 1933, 30, 691-692.—Abstract.—*J. F. Dashiell* (North Carolina).

2886. **Gräf, A.** *Über die haptisch symmetrische Einstellung von Strecken.* (The symmetrical setting of distances by touch and kinesthesia.) *Zsch. f. Sinnesphysiol.*, 1934, 64, 283-309.—Subjects were required to make settings of linear distances equal to

distances perceived by means of the two forefingers. They attempted to make each setting exactly symmetrical with the original with respect to the median plane of the body. The distances to be copied lay one in each of three planes, the frontal-horizontal, the sagittal-horizontal, or the vertical. No subject succeeded in making a correct symmetrical setting. Distances in the frontal-horizontal and sagittal-horizontal planes were, in general, set too near the median plane. Vertical distances were set too near to, or too far from, the median plane when the originals were respectively far from, or near to, this plane; a similar contrast was found with regard to the distance of the setting from the body. Errors were least in the vertical plane. Short distances were usually set too long; longer distances showed larger errors, but in both directions.—*F. W. Irwin* (Pennsylvania).

2887. Gurnee, H. Thresholds of vertical movement of the body. *Psychol. Bull.*, 1933, 30, 684.—Abstract.—*J. F. Dashiell* (North Carolina).

2888. Hartmann, G. W. The facilitating effect of strong general illumination upon the discrimination of pitch and intensity differences. *Psychol. Bull.*, 1933, 30, 689-690.—Abstract.—*J. F. Dashiell* (North Carolina).

2889. Heiser, F. Stimulus-duration and cutaneous sensations of warmth. *Psychol. Bull.*, 1933, 30, 691.—Abstract.—*J. F. Dashiell* (North Carolina).

2890. Hoagland, H. The physiological control of judgments of duration: evidence for a chemical clock. *J. Gen. Psychol.*, 1933, 9, 267-287.—The author gives evidence which shows that judgments of short durations vary with the internal temperature of the body. The absolute judgments of time by the same subject may differ from day to day, but the effect of temperature on the time judgments is constant. The judgments of short duration may depend on the velocity of a particular continuous chemical reaction (clock) in the nervous system, probably irreversible in nature, and catalyzed in a particular manner corresponding to $\mu = 24,000$ calories. Factors other than temperature, such as sensorimotor activity, may modify the speed of the chemical clock, and hence our subjective judgments of time. Physiological events which may determine the estimation of long durations are considered, and conclusions as to the mechanisms determining psychological time are discussed.—*H. Cason* (Wisconsin).

2891. Howells, T. H. An experimental study of speech perception. *Psychol. Bull.*, 1933, 30, 690.—Abstract.—*J. F. Dashiell* (North Carolina).

2892. Jellinek, A. Ueber die Schallsinne und über die Bedingungen der Ohres. (On the auditory sense and conditions of the ear.) *XIV Cong. int. di fisiol., Sunti.*, 1932, 127.—In higher vertebrates sound reception is localized in the cochlea. Reflexes can nevertheless be obtained with sound stimulation in birds and dogs, after double ablation of the cochlea, and even of the entire labyrinth, which implies a supplementary role played by the secondary senses, the

vibratory sense, and the sense of pressure. Sound stimuli arouse reflexes of position and of movement; reciprocally, modifications of position and movement influence sound perception. For a complete analysis of sound experience, the total physiological complex and the total psychic situation of the organism must be considered.—(Courtesy *Année psychol.*)

2893. Kravkov, S. W., & Semenovskaja, E. N. Steigerung der Lichtempfindlichkeit des Auges durch vorangehende Lichtreize. (Enhancement of the light sensitivity of the eye by preceding light stimuli.) *Graefes Arch. f. Ophth.*, 1933, 130, 513-526.—When a subject is exposed to weak general illumination for a considerable period terminating with relatively intense localized stimulation, his absolute threshold in an ensuing dark adaptation period is definitely lower than in trials when the special intensive stimulus is omitted. Three subjects were used and optimum values were determined for the intensity and the duration of the special stimulus. Heightened sensitivity was manifest not only when the special stimulus and the subsequent threshold tests were binocular, but also when the tested eye was not the stimulated eye. When one eye was stimulated but each eye was separately tested, the stimulated eye proved to be the more sensitive. The increased sensitivity is interpreted as being of central origin.—*S. M. Newhall* (Yale).

2894. Kreezer, G. The conditions underlying the time and space errors. *Psychol. Bull.*, 1933, 30, 685-686.—Abstract.—*J. F. Dashiell* (North Carolina).

2895. Lanier, L. H. The neural basis of cutaneous sensitivity. *Psychol. Bull.*, 1933, 30, 690-691.—Abstract.—*J. F. Dashiell* (North Carolina).

2896. Lauer, A. R. Color discrimination of relatively pure colors in relation to intensity differences by normal and color-blind subjects. *Psychol. Bull.*, 1933, 30, 687-688.—Abstract.—*J. F. Dashiell* (North Carolina).

2897. Lely, U. Deformable lens model of the eye. Purkinje images. *Physica*, 1933, 13, 305-319.—*R. R. Willoughby* (Clark).

2898. Mezzino, L. Sulla percezione dei pesi. (On the perception of weights.) *Scritti onore Kiesow*, 1933, 124-132.—The author gives an historical survey of the topic, including the recent studies of Ponzo on the illusory phenomena of weight evaluation. The author's apparatus was designed to avoid the influence of such heterogeneous factors as volume and form. The weights were from 1 to 10 gm. They were presented in pairs differing by 100-200 mgm. The subject used the left index finger, then the right, and then both together. Discrimination was more exact when a heavier weight followed a lighter one, a difference of 200 mgm. being sufficient. The author comments upon the speed of discrimination, upon the rôle of memory, and upon the influence of exercise and fatigue.—*R. Calabresi* (Rome).

2899. Oort, A. J. P. Die Wiederherstellung der Empfindlichkeit nach einem Lichtreiz. (Repeated elicitation of sensitivity after a light stimulus.)

Amsterdam: N. V. Noord-Hollandsche Uitgevers Maatschappij, 1932. Pp. 46. Fl. 1.50.—R. R. Willoughby (Clark).

2900. Parsons, J. H. The Thomas Young oration. *Trans. Opt. Soc.*, 1931, 32, 165-183.—A discussion of the extent to which modern interpretations regarding the visual reception of color have been influenced by Thomas Young's theory of color vision.—(Courtney *Année psychol.*)

2901. Pastore, A. Nuove ricerche logiche applicate al calcolo del processo psicofisico e della cronassia. (New logical investigations with reference to the determination of psychophysical processes and of chronaxy.) *Scritti onore Kiesow*, 1933, 53-68.—As a result of his researches on the determination of the psychophysical process, of mental work, and of chronaxy, the author affirms that the psychophysical calculus of three variables gives a demonstration of the autonomy of psychophysics and experimental psychology, because the author's results show a quantitative equivalence between an internal event and the difference of two psychophysical states, with a qualitative irreducibility of these factors.—R. Calabresi (Rome).

2902. Pätzold, N. Über die Bedeutung des Zeitfaktors bei Tastwahrnehmungen. (The significance of the time factor in tactual perception.) *Zsch. f. Sinnesphysiol.*, 1934, 64, 325-337.—Subjects compared the standard distance between two spots on the skin stimulated by pressure-points with the distance moved over by a point starting at one of these spots and proceeding with known velocity toward the other. The subjects announced when the moving point seemed to them to have traversed a distance equal to the standard. When the velocity was 2 cm./sec. and higher, the comparison-distance was made approximately equal to, sometimes greater than, the standard. Between 1 and 2 cm./sec. the comparison distance was made the smaller, the less the velocity.—F. W. Irwin (Pennsylvania).

2903. Polack, M. Sur les anomalies de la vision des couleurs. (On anomalies in color vision.) *C. r. Acad. sci.*, 1933, 197, 1003-1005; 1253-1254.—The author declares that the trichromatic theory does not agree with the facts in the case and that color vision cannot be reduced to three fundamental colors. He asserts that the physiology of the chromatic sense seems to be characterized by two factors: the position of the light maximum in the spectrum and the presence of two unitonal regions, one in the red and the other in the violet sector. In anomalies of color vision, the first factor or both of them are modified. If there is a displacement of the light maximum without extension of the unitonal regions, we have the Rayleigh type. If there is a displacement of the light maximum and an extension to the neutral zone of the two unitonal regions, we have daltonism, which is the Nagel type if the displacement is towards the red and the Dalton type if it is towards the blue. If this displacement towards the blue is still more accentuated and if the two unitonal regions are fused, we

have a total achromatopsia.—Math. H. Piéron (Sorbonne).

2904. Polack, M. Sur les anomalies de la vision des couleurs. (On the anomalies of color vision.) *Recherches et inventions*, 1933, No. 228, 397-405.—Math. H. Piéron (Sorbonne).

2905. Ponzo, M. Il metodo delle variazioni continuative degli stimoli nella vita percettiva. (The method of continuous variation of stimulation in perception.) *Scritti onore Kiesow*, 1933, 1-15.—The method of continuous variation of stimulation, which the author has used in different fields of perception, gives new results, particularly with reference to the knowledge of fundamental principles, of the determiners of psychic activity in perception, of representations, of movements, tendencies, and efforts. The researches in part concern the perception of weight, where one observes a decrease in perception and modifications in the volume and form of the stimulating objects. In a second series of tests the progressive reduction of the stimulating object results in adaptation which gives the subjective impressions of microchiria. In the other series of tests one notes the tendency, with continuous variation in the direction of a movement, for a reestablishment of the representative equilibrium, for the predominance of directive influences, and for the establishment of a subjective homogeneity between the representations of uniform and dissimilar stimuli. The perceptual syntheses aroused in these experiments by complications, similarities, and dissimilarities produce genuine phenomena of spatial disorientation.—R. Calabresi (Rome).

2906. Quaglio, —. L'azione dei raggi ultravioletti sull'acutezza visiva. (The effect of the ultra-violet rays on visual acuity.) *Ann. di ottol.*, 1932, August.—According to the author, it has been generally assumed that the presence of ultra-violet rays in light has the effect of reducing the visual acuity, although there has been no experimental proof of this. His investigation of the problem consisted in illuminating the test-type by light rich in ultra-violet, and testing the acuity. This determined, he introduced filters which cut off the ultra-violet light, and after increasing the illumination on the type in proportion to the diminution caused by the filter, he has remeasured the acuity. It is necessary to make the adjustment in the amount of illumination, since the acuity depends largely on this. When the adjustment is accurately made, he finds that there is always an increase, slight in some cases, considerable in others, in the acuity when the ultra-violet light is excluded. The author explains the observation as follows: the lens fluoresces under the action of ultra-violet rays and the light emitted by the lens will fall on the macula and to some extent blur the retinal image.—R. J. Beitel, Jr. (Clark).

2907. Rauhfs, K. Sinnesphysiologische Untersuchungen des Geschmackssinnes mit Hilfe von Stammbetäubung des N. lingualis und unter Verwendung spezifisch unterschwelliger Schmecklösungen. (Investigations on the sensory physiology of the sense of taste, with the aid of narcosis of the

lingual nerve and with the application of specifically subliminal taste solutions.) *Dtsch. Monatssch. f. Zahnheilk.*, 1932, 14, 637-652.—R. R. Willoughby (Clark).

2908. Renshaw, S. The influence of solution temperature on the gustatory stimulus limens. *Psychol. Bull.*, 1933, 30, 684-685.—Abstract.—J. F. Dashiell (North Carolina).

2909. Rohde, K.-H., & Jaensch, E. Ueber Schichtenstruktur und Entwicklungsgeschichte der psychophysischen Organization. VI. Beiträge zur Frage des Farbensehens unter dem Gesichtspunkt der Funktionsschichten und Grundtypen. (On the stratified structure and evolution of the psychophysical organization. VI. Contributions to the question of color vision from the point of view of functional levels and basic types.) *Zsch. f. Sinnesphysiol.*, 1932, 63, 93-124.—An investigation into the color sensitivity in twilight of the "integrated" and "disintegrated" types is described. The Purkinje phenomenon appeared with momentary adaptation and occurred in greater degree with integrated than with disintegrated subjects. Individual discrimination of color vision, especially the increased sensitivity to red of the integrated subjects, remained also in twilight. Weak colored stimuli which in light, with a fixation period of 30 seconds, gave after-images with all subjects, in darkness gave negative after-images only with strongly integrated subjects. Under the same conditions, the disintegrated subjects had either no after-images, or, with much lengthened duration of the stimulus, a weak, short-lived negative after-image. With briefer stimulation, a positive after-image appeared with integrated subjects, even with a duration of 1/90 second. Under like conditions of stimulation the integrated subjects had a positive after-image of longer duration than the disintegrated. The best possible conditions for the arousal of a positive after-image existed when a moderately strong stimulus affected the dark-adapted eye and the after-image was observed in the dark. Meaningful figures gave clearer and more enduring positive after-images than meaningless figures. The method of choosing the integrated and disintegrated subjects is described.—T. J. Snee (Pennsylvania).

2910. Salov, H. L. An interesting case of acquired eye-tic. *Amer. J. Optom.*, 1934, 11, 109-110.—R. J. Beitel, Jr. (Clark).

2911. Santha, K. v. Ueber das Verhalten der primären optischen Zentren bei einseitiger peripherer Blindheit. (On the function of the primary optical centers in peripheral unilateral blindness.) *Graefes Arch. f. Ophth.*, 1932, 129, 224-237.—Minkowski had concluded that the lamellar structure of the external geniculate body was in direct functional connection with the termination of homolateral fibers and crossed fibers, the former leading to the periphery and the latter to the center. Henschen maintained, on the contrary, that there is intimate mingling of the related fibers of the two eyes. The case analyzed by Santha, where a lesion of the right nerve resulted in a complementary atrophy in the external geniculate bodies, peripheral in the left body and central in the

right body, confirms the conclusions of Minkowski.—(Courtesy *Année psychol.*)

2912. Schaefer, H. Nachbilder im Augenblicksehen. (After-images in momentary vision.) *Zsch. f. Sinnesphysiol.*, 1932, 63, 125-131.—An after-image which is momentarily illuminated after it has previously been observed by the dark-adapted eye, during this illumination appears evenly negative. By the shortest illumination, however, positive effects occur. The moment immediately following the illumination show a different relation—the aging after-image with its after-excitation either eclipses or is outshone by the after-image of the background which stimulates the eye during the illumination. Old after-images appear in this manner negative in the after-image of the background; young after-images, on the contrary, appear positive.—T. J. Snee (Pennsylvania).

2913. Schaefer, H. Nachbilder im Flimmerlicht. (After-images in flicker illumination.) *Zsch. f. Sinnesphysiol.*, 1932, 63, 132-150.—An experiment on the appearance of after-images in flicker light is described. The after-images from a light fixated for 10 seconds were projected upon a white sheet through a episcotister. The latter had sectors whose black-transparent relation was variable. It was found that the time during which a trace (positive or negative) of the after-image remains in flicker decreases with augmentation of the number of rotations and with diminution of the black content of the disk. Under determined conditions a single, purely positive or purely negative after-image can appear after longer observation in the flicker. Negative images are stronger with large black sectors and positive images brighter with small black sectors. Augmentation of the number of rotations with the same sectors causes an increase in the brilliance of positive images. This holds only within limits. In twilight the after-images remain longer and continue for a longer period negative than by daylight. The theoretical aspects are discussed.—T. J. Snee (Pennsylvania).

2914. Schöbel, R. Über die absolute Erkennung zweier Druckreizorte. (The absolute perception of two spots stimulated by pressure.) *Zsch. f. Sinnesphysiol.*, 1934, 64, 310-324.—Two simultaneous pressure stimuli were applied to different parts of the skin, the subjects being required to open their eyes and point out the two stimulated spots. The error of localization was the greater the more proximal the part stimulated. The first spot pointed out was affected with less error than the second. Less error was present in the transverse than in the longitudinal direction. The distance between the two spots tended to be underestimated, the underestimation being greater where the spatial sensitivity was less.—F. W. Irwin (Pennsylvania).

2915. Süffert, F. Phänomene visueller Anpassung. (Phenomena of visual adjustment.) *Zsch. wiss. Biol.*, 1932, 26, 147-316.—(*Biol. Abst.* VIII: 5830).

2916. Taylor, C. D. The perception of black and white symbols. *Psychol. Bull.*, 1933, 30, 669-670.—Abstract.—J. F. Dashiell (North Carolina).

2917. Ten Doesschate, G. *Über die Geschichte der Kenntniss des Gesichtsfeldes.* (On the history of knowledge of the visual field.) *Arch. f. Augenhk.*, 1933, 108, 317-333.—The author aims to fill the lacunae in the history of this subject by brief comments and by bringing together references to scattered contributions of divers writers, especially earlier ones. Color zones, perimetry, the blind spot, size of the visual field and effects upon it of pupillary diameter and disease, are among the topics mentioned.—S. M. Newhall (Yale).

2918. Teplov, B., & Jakovleva, S. *Über die Gesetze der räumlichen und zeitlichen Farbmischung auf der Netzhaut.* (The laws of spatial and temporal color mixture on the retina.) *Graefes Arch. f. Ophth.*, 1933, 130, 463-468.—When two or more colors stimulate the same retinal area in such rapid succession that only a single color is perceived the mixture is called temporal; when two or more colors simultaneously stimulate adjacent retinal areas which are so small that only a single color is perceived, the mixture is spatial. The problem was to determine whether the same or different proportions of given colors would be necessary to secure a perceptual match of the temporal and spatial mixtures. With a Lummer cube the two types of mixture were made to occur on adjacent retinal areas and the proportions of the spatial mixture were adjusted to match the temporal mixture. Tabled results show the matching proportions to be essentially the same, and so the writers conclude that the mixture laws for time and space are identical.—S. M. Newhall (Yale).

2919. Thorne, F. C. *Factors causing variability in visual threshold measurements.* *Psychol. Bull.*, 1933, 30, 687.—Abstract.—J. F. Dashiell (North Carolina).

2920. Whitmer, C. A. *Peripheral form discrimination under dark-adaptation.* *J. Gen. Psychol.*, 1933, 9, 405-419.—The investigation was made under conditions of dark-adaptation, and the forms used were a circle, triangle, diamond, hexagon, rectangle, and square, each form having an area of 10 square cm. The subjects used both eyes and discriminated two stimuli which were presented simultaneously, each at a corresponding location on a given meridian in the field of vision. The rank of the forms in percentage of correct discriminations was: triangle, diamond, square, rectangle-circle, and hexagon. The extent of the peripheral field for the hexagon was from 10° to 20° less than for the other forms. The decrease in accuracy of discrimination was most rapid on the upper vertical quadrant and least rapid on the horizontal quadrants.—H. Cason (Wisconsin).

2921. Zumbusch, L. v. *Ueber den Schmerz.* (On pain.) Munich: Hueber, 1933. Pp. 19. RM. 0.60.—R. R. Willoughby (Clark).

[See also abstracts 2857, 2927, 2938, 2962, 3008, 3018, 3027, 3031, 3032, 3037, 3040, 3041, 3043, 3050, 3055, 3058, 3067, 3068, 3072, 3073, 3076, 3077, 3085, 3101, 3183, 3202, 3245.]

FEELING AND EMOTION

2922. Binet, A. *L'amour et l'émotion chez la femme.* (Love and emotion in woman.) Paris: Alcan, 1933. Pp. 165. 16.50 fr.—The author gives an objective analysis of feminine sexual psychophysiology. Two chapters on emotion and emotivity precede the discussion of the author's particular theory, which he expounds in the next fourteen chapters. He discusses the emotions of the prepubic period, of puberty, and of the age of fruition. Following this he treats of shame, coquetry, and sexual "equivalents." He discusses the different aspects of love (instinctive, affective, imaginative or romantic, and spiritual or mystic). He concludes with sexual emotional anomalies and perversions and sexual emotions in the spinster and in women after the menopause.—Math. H. Piéron (Sorbonne).

2923. Brand, E. *Herseys Untersuchung der emotionalen Periodizität im Menschen.* (Hersey's investigation on emotional periodicity in man.) *Psychotechn. Zsch.*, 1933, 8, 131-139.—By means of a new method, Hersey attempted to measure emotional periodicity. During several months the employees of some American and German railroad shops were questioned daily about their moods and emotional dispositions. They had to classify their emotionality into 13 degrees four times each day. No regular tendencies were found for daily or weekly emotionality. However, if one took the mean score for the week, and if one plotted several of these weekly averages, after a definite number of weeks there appeared a decided dip in the curve. The frequency of these periods of depression are fairly constant for a given individual, but they vary greatly from individual to individual. The differences were usually from 3½ to 6 weeks; in one case it was 9 weeks. This emotional periodicity was also recognizable in the worker's efficiency, in the effort with which he applied himself, and in his feelings of fatigue. Blood pressure, however, showed no relationship. The author does not explain this periodicity of the emotional life in men. He believes that, as yet, little is known about the nature and the causes of the phenomenon. However, he points out that these might be caused by physiological mechanisms similar to those found in women during menstruation.—C. Burri (Chicago).

2924. Cannon, W. B. *The significance of the emotional level.* *Scient. Mo.*, 1934, 38, 101-110.—Strong emotions may upset the organism; and this common observation gains convincingness when it is understood where such emotions have their organic seats, viz., in the thalamus, which is shared with the lower animals and is their seat for primitive attack and defense reactions, and in the sympathetic division, which regulates body heat, blood sugar, the acid-base relation in the blood, and probably water balance, fat metabolism, and sleep.—J. F. Dashiell (North Carolina).

2925. D'Onghia, F. *Biologia delle emozioni.* (Biology of the emotions.) Bologna: Capelli, 1933. Pp. 164. L. 25.—In the present monograph the author seeks to formulate a cortical theory of emo-

tions. The principal theories examined are: the endocrine-sympathetic theory; instinctive and affective theories which localize emotions in subcortical centers; and the intellectual and cortical theories. According to the author, emotion is a complex phenomenon which results from three elements: the mental representation, which is the point of departure; kinesthetic disturbance; and the organic change, which is the end result. A kinesthetic disturbance which lacks a mental cause may also determine organic changes similar to emotional reactions; but these reactions are not emotional any more than are the changes which follow hyperthyroidism or hyperadrenalism. Mental, physical, and chemical stimulations may interact in such a manner that a given mental representation may arouse different emotions in the same individual. No constant and necessary connection can be established between the quality of the representation and the organic reaction, because the latter is also conditioned by the neurovegetative constitution of the subject. The organic reaction is not necessary for the determination of the kinesthetic impression, which is determined solely by the mental evaluation of the psychic stimulation and by the kinesthetic tonality at the moment of stimulation. The organic manifestations act upon kinesthesia only in a secondary fashion. In the normal adult man, the emotional process is established in the cortex (according to the author, in the post-Rolandic area), while the subcortical centers govern only the external expressions of the emotion.—*R. Calabresi* (Rome).

2926. **Duffy, E.** Emotion: an example of the need for reorientation in psychology. *Psychol. Rev.*, 1934, 41, 184-198.—An examination of the bases on which "emotional" responses are supposed to be distinguishable from other responses, such as (1) the physiological mechanisms involved, (2) the intensity of the reaction, (3) the disorganization, (4) the uniqueness of the content, etc., shows that all involve differences in degree, not in kind. The attempt to study emotions as such should be abandoned, and replaced by a study of variation in the simple, irreducible aspects of behavior in general.—*A. G. Bills* (Chicago).

2927. **Guilford, J. P.** The affective value of color as a function of hue, tint and chroma. *Psychol. Bull.*, 1933, 30, 679.—Abstract.—*J. F. Dashiell* (North Carolina).

2928. **McDougall, W.** The nature of emotion. *J. Abn. & Soc. Psychol.*, 1933, 28, 245-258.—In a recent article, Drever stated his objections to the formula that each primary emotional quality is an aspect of the working of one of the instincts. He claimed that McDougall was guilty of emphasizing the experience aspect of emotion while neglecting the response aspect; and of emphasizing the affective in the emotional experience while ignoring the rest of it. McDougall replies to the first charge by claiming that his formulation was proposed in order to remedy that error; and pleads not guilty to the second, asserting that again and again he has urged that conative experience is an essential part of emotional experience.

He also presents a defense of his use and classification of instincts.—*C. H. Johnson* (Boston Psychopathic Hospital).

2929. **Ruml, B.** Theory of nostalgic and egoic sentiments. *Psychol. Bull.*, 1933, 30, 656.—Abstract.—*J. F. Dashiell* (North Carolina).

[See also abstracts 2983, 3324, 3348.]

ATTENTION, MEMORY AND THOUGHT

2930. **Boyd, P. P.** Freshmen and seniors. *School & Soc.*, 1933, 38, 842-844.—Of 319 who entered the University of Kentucky in the fall of 1929, 28.2% graduated in 1933; 38.2% remained for four years in the institution. Causes for the shrinkage are considered. Among these are scholastic failure, transferring to other schools, lack of funds, poor health, and inadequate preparation.—*H. L. Koch* (Chicago).

2931. **Comicescu, G.** Raportul dintre intuitie si abstractie. (The relation between intuition and abstraction.) Cluj, Rumania: Lab. Pedol. si Ped. exper., Univ. Cluj, 1931. Pp. 229. Lei 140.—Experimental researches on intuition and abstraction are summarized. Modern education seems to over-emphasize the importance of intuition and neglect the training for abstraction.—*N. Margineanu* (Chicago).

2932. **Faggi, A.** Sulle cosiddette dall'Herbart "frei steigende Vorstellungen." (Concerning the "spontaneous images" of Herbart.) *Scritti onore Kiesow*, 1933, 117-123.—The author is in agreement with Kiesow in holding that there are no images which appear freely and spontaneously in consciousness; but he does not believe that representations must be produced or psychically conditioned according to the principle of Wundt. Sometimes the association may be only the occasion or the concomitant cause of the reproduction. The physiological constellation of the brain cooperates in producing a sudden representation.—*R. Calabresi* (Rome).

2933. **Fink, E.** Beiträge zu einer phänomenologischen Analyse der psychischen Phänomene, die unter den vieldeutigen Titeln "Sich denken als ob," "Sich etwas bloss vorstellen," "Phantasieren" befasst werden. (Contributions to a phenomenological analysis of the psychical phenomena which are included under the several titles: "to think as if," "merely to imagine something," and "to fantasize.") Halle: Karras, Kröber & Nietschmann, 1930. Pp. 70.—*R. R. Willoughby* (Clark).

2934. **Hanawalt, E. M.** Whole-part learning. *Psychol. Bull.*, 1933, 30, 701.—Abstract.—*J. F. Dashiell* (North Carolina).

2935. **Johnson, L. M.** Similarity of meaning as a factor in retroactive inhibition. *J. Gen. Psychol.*, 1933, 9, 377-389.—Using the customary method of studying this problem, retention was found to be more efficient after rest than after interpolated learning, and retroactive inhibition decreased with a decrease in similarity of meaning between the original and interpolated learning.—*H. Cason* (Wisconsin).

2936. Jones, J. R. The influence of some anti-pyretic drugs on learning. *J. Gen. Psychol.*, 1933, 9, 472-475.—The author studied the effects of aspirin and quinine upon the rate of learning nonsense syllables. The average number of trials required to learn the lists of syllables was approximately the same with aspirin, with quinine, and under control conditions.—H. Cason (Wisconsin).
2937. Kuraishi, S. An experiment on the controlled association. *Jap. J. Psychol.*, 1933, 8, 353-375.—The purpose of this study is to observe modalities in the process of exercise of the controlled association which continues for a considerably long period and to contribute herefrom to the study of thinking. 20 new stimulus-words were given the subjects and they were to respond with their subordinate concepts. The exercise lasted for 30 days in succession. The instruction was as follows: Respond quickly with an adequate superordinate concept to a given stimulus-word. After the reaction the subjects made introspective reports freely. It was noticed that (1) there is a remarkable reduction in reaction time in spite of the fact that new stimulus-words were used every day; (2) the number of reports of the so-called interpolated phenomena, which take place between presentation of the stimulus and reaction, decreases; moreover, the grade of the "Eindringlichkeit" of these phenomena diminishes also; (3) the reaction-word becomes more adequate when considered either from the objective side or from the introspection of the subject.—S. Kuraishi.
2938. Leeper, R. A study of a neglected portion of the field of learning—the development of sensory organization. *Psychol. Bull.*, 1933, 30, 689.—Abstract.—J. F. Dashiell (North Carolina).
2939. McGeoch, J. A. The temporal course of inhibition from interpolated learning. *Psychol. Bull.*, 1933, 30, 698-699.—Abstract.—J. F. Dashiell (North Carolina).
2940. McKinney, F. Retroactive inhibition and recognition memory. *Psychol. Bull.*, 1933, 30, 699-700.—Abstract.—J. F. Dashiell (North Carolina).
2941. Meenes, M. Eidetic phenomena in negro school children. *Psychol. Bull.*, 1933, 30, 688-689.—Abstract.—J. F. Dashiell (North Carolina).
2942. Mewes, F. Richtigkeits- und Wahrheitsurteile. (Judgments of correctness and truth.) *Arch. f. d. ges. Psychol.*, 1933, 89, 193-238.—A series of meaningless words, classified and coded according to a definite scheme, were printed on cards and presented to subjects, who were then asked to pick out cards corresponding to certain code combinations. The subject was then told whether or not his choice was correct. If correct, he was asked to tell why it was correct; if false, why he had chosen that particular card. The answers to these questions showed that judgments were of two distinct types: those of which the subject was sure simply because of certain observed characteristics of the word (*Wahrheitsurteile*), and those in which the subject pointed out the relationship between the characteristics of the word and the system of classification (*Richtigkeitsurteile*). Since a definite correlation was noted between personality type and the method used in justifying the choice, it is suggested that the technique may well be used as a personality test.—E. L. Kelly (Connecticut State College).
2943. Musatti, C. L. Oblio e arricchimento mnestetico nelle deposizioni testimoniali sopra fatti concreti. (Forgetting and mnemonic enrichment in testimonial evidence relative to concrete facts.) *Scritti onore Kiesow*, 1933, 42-52.—In previous researches the author has confirmed a lessening in the knowledge of fact and in the degree of fidelity in the second testimonial reports. In the present experiments he attempts to isolate the principle which causes the process of enrichment. For this purpose it is necessary to eliminate the condition of the second deposition, because the fact that one report has already been given influences memorial fixation. The author presents the method which he followed in the observations, analyzes the factors at work in the different depositions, explains the process by which he treats the quantitative data, and gives the numerical results of his observations. In this investigation forgetting proceeds naturally without being modified by the first report. The loss in an earlier period is not found under these circumstances. Contrary to the formulae of Piéron and Ebbinghaus, there is an increase in the extent of knowledge of fact in the third week. This is the result of a factor which acts positively on the memorial material, an action that becomes determinable only in the third week, although it also exists immediately after the perceptive phase. The degree of fidelity decreases after the first week. In the third week there is a slight increase. The errors of testimony increase after the first week, decrease after the second week, and are thereafter about constant. The impression of "recalling too little" in relation to the lapse of time is very important in the fidelity of report, particularly in the first week.—R. Calabresi (Rome).
2944. Nohl, J. Erinnerung und Gedächtnis. (Recollection and memory.) *Langensalza: Beltz*, 1932. Pp. 97.—R. R. Willoughby (Clark).
2945. Sato, M. On the psychological meaning of age development and effect of practice in memory. *Jap. J. Psychol.*, 1933, 8, 857-890.—The author intended to study memory in its actual process. Experiment 1: Each of the stimulus-words (10 or 12), which are arranged by rank, is kept out of sight by a movable celluloid cover. To learn the words, subjects may lift off the covers as often as they wish. The subjects are children of 7, 9, 11 and 13 years old. It was found that the way of lifting off the covers and the attitude of reproduction varies with age. Experiment 2: The stimulus was a large picture, in which 12 animals with various poses are sketched. Instruction: Learn (1) the names of the animals and (2) their positions in the picture. But immediately after an exposure of one minute, subjects must answer not only (1) and (2) but also (3) the directions, and (4) the poses of the animals. The results

of (1) and (2) showed normal development curves, but those of (3) and (4) only very weak curves. Experiment 3: The method was the same as that of Experiment 1. The subjects were two students. They repeated the learning with new series every day. At first they spent about 14-16 minutes to learn one series, but at the end of the learning only 2 or 3 minutes. In this long process, the way of lifting off the covers, the attitude of reproduction and other procedures changed gradually.—*M. Sato*.

2946. Wilhelm, W. *Beiträge zur Psychologie des Schliessens*. (Contributions to the psychology of reasoning.) *Arch. f. d. ges. Psychol.*, 1933, **89**, 371-429.—In the first part of this investigation it is shown that an inference is made only when a determination to draw a conclusion is present. This may be produced by appropriate instructions or it may persevere from a previous task. The exact sequence of the various steps leading to an inference is discussed and analyzed. Marked individual differences were noted with regard to the manner in which inferences are made. In general, introverts proceeded in an analytical and systematic fashion, while extroverts showed a tendency to jump to conclusions. The influence of training in logic was also noticeable.—*E. L. Kelly* (Connecticut State College).

2947. Woodrow, H. The effect of change in difficulty at different levels of performance. *Psychol. Bull.*, 1933, **30**, 657-658.—Abstract.—*J. F. Dashiell* (North Carolina).

[See also abstracts 2970, 2975, 2981, 3006, 3010, 3013, 3330, 3341.]

NERVOUS SYSTEM

2948. Bronk, D. W., Ferguson, L. K., & Solandt, D. Y. Inhibition of cardiac accelerator impulses by the carotid sinus. *Proc. Soc. Exper. Biol. & Med.*, 1934, **31**, 579-580.—Certain aspects of a possible reflex mechanism acting to inhibit the cardiac accelerators in the vagus were investigated by observing sympathetic impulses to the heart while varying the pressure in the carotid sinus. Using cats under nembutal anesthesia, the number of afferent impulses going to the medullary center was increased by increasing pressure within the carotid sinus. The effect of this increase of afferent impulses on the cardiac accelerator discharge was determined by recording the impulses in one of the small nerves running from the stellate ganglion to the heart. As pressure within the sinus is raised there is a decrease and finally a complete inhibition of sympathetic impulses, lasting for some seconds before a return of the discharge. The findings also indicate that the reflex inhibition of accelerator tone is bilateral. Evidence of summation of inhibition from both carotid sinuses was found. The implications of the findings are briefly discussed.—*P. Seckler* (Radcliffe).

2949. Bunelli, B. Contributo alla fisiopatologia dei centri vegetativi del diencefalo con speciale riguardo al centro per la regolazione del sonno e della vigilia. (Contribution to the physiopathology

of the vegetative centers of the diencephalon, particularly in regard to the center for the regulation of sleep and of wakefulness.) *Riv. di biol.*, 1932, **14**, 375-461.—Sleep, a vagal phenomenon, corresponds to a decrease in the flow of stimulation to centers of the infundibulo-tuberian region, while wakefulness, a sympathetic phenomenon, corresponds to an increase from this source of stimulation. The author has injected various salts into the intra-tuberian zone of cats. His results agree with expectations based on the influence of these ions on the permeability of cell membranes: viz., an increase in permeability in the region of the tuberian neurons leading to excitation by increase of sensitivity (with potassium, barium and strontium), and a decrease leading to sleep by the inverse effect (with magnesium and calcium).—(Courtesy *Année psychol.*)

2950. Colucci, C. In quanto il cervello, nella sua funzione psichica, appare un organo in movimento. (How the brain in its psychic functions seems to be an organ in movement.) *Scritti onore Kiesow*, 1933, 140-148.—After considering the various philosophical, psychological, and physiological theories which support a specific dynamism in psychophysical phenomena, the author presents a summary of his researches, which lead him to the conclusion that there are psychic activities which are aroused by physiological processes which one may designate as "effective, global cerebral contractions without any accompanying subjective sensation."—*R. Calabresi* (Rome).

2951. Fischer, M. H. Aktionsströme der Hirnrinde. (Action currents in the cerebral cortex.) *XIV Cong. int. di fisiol., Sunti.*, 1932, 80-81.—Rhythmic action currents following sensory stimulation have been recorded from definite regions of the cerebral cortex of rabbits, cats, dogs, and monkeys. Visual stimulation gives "on and off" effects. The latent time increases when the intensity of stimulation is diminished. In reflex hyperexcitability such as is obtained with chloralose in the cat, action currents are produced under the influence of reflexogenous stimulation. In curarized animals the injection of substances like caffeine, cocaine, and strychnine brings about a considerable exaggeration of the resting potentials.—(Courtesy *Année psychol.*)

2952. Kabat, H., Magoun, H. W., & Ransom, S. W. Electrical stimulation of the hypothalamus. *Proc. Soc. Exper. Biol. & Med.*, 1934, **31**, 541-542.—Investigating the suggestion that both the parasympathetic and sympathetic divisions of the autonomic system are represented in the hypothalamus, the authors minutely explored this region in 44 cats, using faradic stimulation. Pupillary dilation and changes in respiration, blood pressure, and bladder tonus were elicited. They conclude that the hypothalamus is undoubtedly concerned with sympathetic activity, but no evidence of parasympathetic function has been shown.—*P. Seckler* (Radcliffe).

2953. Magnitzky, A. N., & Mushejew, W. A. Weitere Untersuchungen über die Chronaxieveränderungen während der Parabiose. (Further researches in changes in chronaxy during parabiosis.) *Pflüg.*

Arch. f. d. ges. Physiol., 1932, 232, 604-613.—A parallel is observed between changes in polarization and chronaxy during cocain and phenol parabiosis, which in the opinion of the authors indicates a connection between chronaxy and permeability. No correlation is found between changes in polarization and rheobase. Other effects of parabiosis upon chronaxy are discussed.—*B. F. Skinner* (Harvard).

2954. *Renqvist, Y., & Hirvonen, M.* Die Abhängigkeit der Reizbarkeit des Nervenmuskels von der Temperatur. (Dependence of the excitability of the nerve-muscle system upon temperature.) *Skand. Arch. f. Physiol.*, 1932, 64, 100-120.—The action of temperature shifts the curve to the right for Hoorweg's law (expressing liminal quantities as a function of duration). Chronaxy varies with temperature, while the rheobase changes little, which leads the authors to a chemical representation of the processes, by postulating two chain reactions (as in Hecht's schema for vision). The muscular response occurs when the rate of decomposition of an initial excitatory substance reaches a certain value, fixed for each muscle element.—(Courtesy *Année psychol.*)

2955. *Samssonow, N.* Beitrag zum Studium der Elektronarkose. (Contribution to the study of electro-narcosis.) *Pflüg. Arch. f. d. ges. Physiol.*, 1933, 232, 554-558.—*B. F. Skinner* (Harvard).

2956. *Schmitz, W., & Schaefer, H.* Ueber die positive Nachschwankung des Nervenaktionsstromes. (On the positive deflection of the action current in nerve.) *Pflüg. Arch. f. d. ges. Physiol.*, 1933, 232, 673-674.—The "concentration effect" is an electrolytic rather than an osmotic effect.—*B. F. Skinner* (Harvard).

2957. *Schmitz, W., & Schaefer, H.* Der Aktionsstrom des polarisierten Nerven. (The action current of polarized nerve.) *Pflüg. Arch. f. d. ges. Physiol.*, 1933, 232, 713-726.—Action currents under anodic and cathodic polarization are studied with a cathode-ray oscillograph.—*B. F. Skinner* (Harvard).

2958. *Schwab, E.* Zur Lokalisationsfrage des Schlafzentrums. (On the question of the localization of the sleep center.) *Munch. med. Woch.*, 1932, 79, 94-95.—The author relates two cases where, following a stroke, a tendency to hypersomnia accompanied difficulties of ocular innervation, which confirms the probable localization of the sleep center in the posterior region of the third ventricle and the floor of the aqueduct of Sylvius.—(Courtesy *Année psychol.*)

2959. *Swerdlow, S. M.* Ueber die Summation der Erregungen im Nervenmuskelpräparat. (On the summation of excitation in nerve-muscle preparations.) *Pflüg. Arch. f. d. ges. Physiol.*, 1933, 232, 574-590.—Polarization due to a constant current may block single impulses in a nerve-muscle preparation while permitting tetanic stimulation to take effect. This is said to show the invalidity of the all-or-none law for a nerve-muscle preparation.—*B. F. Skinner* (Harvard).

2960. *Van Dijk, J. A.* On the conduction of the impulses, set up in a bird's 'tween-brain, causing changes in its muscle activity. *Arch. néerl. de physiol.*, 1932, 17, 504-524.—Working with decerebrate pigeons, the author demonstrated that an augmentation in blood pressure and in height of contractions in a rhythmically contracting muscle followed when a crystal of NaCl was placed in a groove made between the lobi optici or when pressure was applied to the exposed diencephalon. Crucial experiments indicated that the stimuli acting upon the muscle fibrils were transmitted humorally. They showed that central impulses flowed out from the diencephalon over the sympathetic elements of the c. n. s. to the thoracic cord, whence they were conducted peripherally, at the levels of the second to sixth dorsal segments, via the preganglionic sympathetic fibers to the splanchnic nerve, which in turn delivered them to the splanchnic area. The rise in blood pressure was ascribed primarily to vasoconstriction in the splanchnic area, followed by an adrenalinemia. Augmentation of the muscular contraction was attributed to the latter.—*C. P. Stone* (Stanford).

[See also abstracts 2895, 2901, 2985, 3024, 3030, 3034, 3037, 3042, 3047, 3070, 3096, 3130.]

MOTOR PHENOMENA AND ACTION

2961. *Asch, S. E., & Klineberg, O.* An experimental study of the relation between constitutional type and performance. *Psychol. Bull.*, 1933, 30, 666.—Abstract.—*J. F. Dashiell* (North Carolina).

2962. *Behr, C.* Der Anteil der Antagonisten an der Pupillenbewegung bei den verschiedenen Reaktionen. (The rôle of the antagonistic muscles in various pupillary reactions.) *Graefes Arch. f. Ophth.*, 1933, 130, 411-426.—An analysis of the action of the pupillary musculature with special reference to the size and shape of the pupillary aperture in reactions to various external and internal stimuli, including cocain and homatropin. Twelve photographs of the pupil.—*S. M. Newhall* (Yale).

2963. *Beniya, S.* Studien über den Skelettmuskeltonus. Ueber die physiologische Bedeutung der hinteren Rückenmarkswurzeln und des sympathischen Grenzstranges für den Sehnenreflex sowie die Muskelplastizität. (Studies on skeletal muscle tonus. Concerning the physiological significance of the posterior spinal roots and the sympathetic chain for the tendon reflex and muscular plasticity.) *Mitt. Med. ges. Tokio*, 1932, 46, 298-315.—(*Biol. Abst. VIII*: 5835).

2964. *Bottazzi, F.* Muscle contractures and their physiological significance. *Scientia*, 1934, 55, 192-208.—Mechanical activity of voluntary muscle manifests itself in the forms of tetanus, postural tonus, twitch, tonic contractions, contractures, and rigor. Each of these is discussed at considerable length, and the various subclasses of each form are identified. Contractures produced by galvanic current, acids, alkalis, ions, alkaloids, glycosoids,

heat and cold, etc. are differentiated, and their distinctions are made clear by the inclusion of eleven half-tone graphs. The author also probes such theoretical problems as the possibility of the existence of functional duality in skeletal muscle; whether this duality (if it exists) can be localized in distinct components, such as the tetanic in the myofibrils and the tonic in the sarcoplasm, or whether it is only in one component, viz., the myofibrils; and whether the tonic activity of the skeletal muscles in the secondary contraction and contracture is significant, physiologically, or profitable to the economy of muscular function. The fifth and concluding section of this paper treats of the physiological significance of the tonic contractility of striated muscles.—*L. S. Selling* (Institute for Juvenile Research).

2965. Eggleton, P. Recent progress in the chemistry of muscular contraction. *Biol. Rev. & Biol. Proc. Cambridge Phil. Soc.*, 1933, 8, 46-73.—(*Biol. Abst.* VIII: 5840).

2966. English, H. B., Welborn, E. L., & Killian, C. D. Paradoxical forgetting or learning without overt practice. *Psychol. Bull.*, 1933, 30, 697-698.—Abstract.—*J. F. Dashiell* (North Carolina).

2967. Essen, K. W. Die Reflexfähigkeit des spinaleu Frosches bei verschiedener Reizfrequenz während der Urethan- und Curarinvergiftung. (Reflex activity of the spinal frog at different frequencies of stimulation under urethane and curare anesthesia.) *Pflüg. Arch. f. d. ges. Physiol.*, 1933, 233, 248-261.—At certain stages of urethane and curare anesthesia reflexes in the spinal frog are lacking for low (2.5-5 per sec.) and high (30-60 per sec.) frequencies of stimulation, but present for intermediate frequencies (10-20 per sec.).—*B. F. Skinner* (Harvard).

2968. Ewert, P. H. The effect of practice upon variability when based on scores weighted in terms of difficulty. *Psychol. Bull.*, 1933, 30, 672.—Abstract.—*J. F. Dashiell* (North Carolina).

2969. Ewing, A. C. Can we act against our strongest desire? *Monist*, 1934, 44, 126-143.—An answer to the question whether we can act against our strongest desire is of great importance to practical ethics and the psychology of character. The experience of so acting, real as it appears, is regarded by many as an illusion, while others avoid the problem by asserting that desires are but partial determinants of action, so that we really can act against our strongest desire. The author urges that what we mean by acting against our strongest desire is acting against the desire we feel most strongly at the time, measured either by its effect on action, when of course the strongest desire prevails, or the intensity of immediate feeling, in which case inhibition is possible. A man may act against his strongest desire (1) by force of habit, or (2) because the desire on which he actually acts has been placed in a very different position from the desire which he resists, or (3) because it is linked with a great number of other desires, sentiments, and tendencies that cover a far more important part of the man's nature than

his strongest desire. The author suggests that psychologists, by developing a practicable system of auto-suggestion, may reduce the practical difficulties in acting against the strongest desire.—*C. M. Diserens* (Cincinnati).

2970. Fay, —. L'épiphyse glande de l'intelligence. (The epiphysis, gland of intelligence.) *Méd. scol.*, 1933, 22, 176-181.—This gland acts selectively on the evolution of gnosis but not on judgment. The author defines gnosis to be the knowledge of a thing, an intellectual operation by which sensorial, motor, and psychomotor images are associated for the purpose of bringing about an isolation of the concepts of objects. Where the intelligence evolves with abnormal slowness, the epiphysis gives the stimulus necessary, at least in part, to offset this retardation.—*Math. H. Piéron* (Sorbonne).

2971. Freeman, G. L. Is there a diurnal rhythm? *Psychol. Bull.*, 1933, 30, 660.—Abstract.—*J. F. Dashiell* (North Carolina).

2972. Guthrie, E. R. Discussion: Pavlov's theory of conditioning. *Psychol. Rev.*, 1934, 41, 199-206.—A reply to Pavlov's recent article in the *Psychological Review* discussing Guthrie's article on conditioning as a principle of learning. He answers Pavlov's objections to (1) using conditioning as an ultimate principle of learning, (2) the explanation of backward conditioning in terms of overlapping stimuli, (3) a remote forward conditioning in terms of mediate stimuli, (4) the explanation of temporary extinction in terms of simultaneous conditioning of inhibiting responses. He criticizes Pavlov's tendency to interpret his experimental findings in terms of suppositional events and states in the cortex. He believes that the conditioned reflex findings may finally be reduced to a single law of association by temporal contiguity.—*A. G. Bills* (Chicago).

2973. Hales, W. M., & Ingle, D. J. Capacity of skeletal muscle in rats to maintain work output. *Psychol. Bull.*, 1933, 30, 659.—Abstract.—*J. F. Dashiell* (North Carolina).

2974. Hamilton, E. L. An experimental study of the reliability of the finger maze. *Psychol. Bull.*, 1933, 30, 675-676.—Abstract.—*J. F. Dashiell* (North Carolina).

2975. Hamilton, H. C. The relation between length of task and amount of work required to learn with finger maze and nonsense syllable material. *Psychol. Bull.*, 1933, 30, 674-675.—Abstract.—*J. F. Dashiell* (North Carolina).

2976. Hegemann, F. Ueber den Isochronismus zwischen den nichttonischen Fasern eines Muskels und dem motorischen Nerven. (On the isochronism of atonic muscle-fibres and the motor nerve.) *Pflüg. Arch. f. d. ges. Physiol.*, 1932, 232, 703-707.—*B. F. Skinner* (Harvard).

2977. Herlitzka, A. Valutazione fisiologica degli atleti. (Physiology of athletics.) Bologna: Capelli, 1931. Pp. 280. L. 15.—(*Biol. Abst.* VIII: 5843).

2978. Kline, L. W. Comparative rate of conditioning organic mechanisms varying in dependence upon

voluntary control. *Psychol. Bull.*, 1933, 30, 676-677.—Abstract.—J. F. Dashiell (North Carolina).

2979. Kriashew, W. J. Der Charakter der Bedingten Reflexe von hypophysektomierten Hunden. (The character of conditioned reflexes in the hypophysectomized dog.) *Pflüg. Arch. f. d. ges. Physiol.*, 1933, 232, 387-401.—The hypophysectomized dog shows marked infantile characteristics and strongly diminished excitability. Irradiation of a conditioned defense reflex is impaired, and extinction is more easily developed. The higher nervous activity shows in general a greater independence or autonomy of the centers.—B. F. Skinner (Harvard).

2980. Ledebur, J. F. v., & Wachholder, K. Nachtrag zur Frage der Heterochronismus zwischen dem "nichttonischen" und dem "tonischen" Teile von Froschmuskeln und dem motorischen Nerven. (Further note on the question of heterochronism of the atonic and tonic parts of frog's muscle and the motor nerve.) *Pflüg. Arch. f. d. ges. Physiol.*, 1932, 232, 708-712.—B. F. Skinner (Harvard).

2981. Lepley, W. M. Some new data on the nature and function of remote associations. *Psychol. Bull.*, 1933, 30, 700.—Abstract.—J. F. Dashiell (North Carolina).

2982. Lessner, A. Über die Determination, Objektion und Perseveration. (Determination, objectification, and perseveration.) *Arch. f. d. ges. Psychol.*, 1933, 89, 239-290.—8 subjects were required to perform tasks with meaningless words. As the result of particular experiences with the material, words were found to have taken on new characteristics (*Objektion*), which showed a perseverative tendency. It was found that this perseveration could be increased to the point that it, rather than subjective determination, determined the activity that would be followed. No relationship was found between perseveration and determination.—E. L. Kelly (Connecticut State College).

2983. Lewis, F. H. Affective characteristics of rhythm. *Psychol. Bull.*, 1933, 30, 679-680.—Abstract.—J. F. Dashiell (North Carolina).

2984. Lubinska, L. Contribution à l'étude des réflexes non itératifs. (Contribution to the study of single reflexes.) Paris: Doin, 1932. Pp. 100.—The lingual-maxillary reflex of Cardot and Laugier may be elicited by a single electrical stimulus applied to the branches of the trigeminal innervating the lingual and palatine mucosa. There must be isochronism between the sensory and motor roots at stimulation. But this is not true for all these branches. For example, the fibers of the lingual mucosa have a chronaxy five times that of the motor fibers. The author offers no explanatory hypothesis. Amplitude of the response increases with intensity of stimulation of a single fiber, which seems to the author to contradict the all-or-none law.—(Courtesy *Année psychol.*)

2985. Martin, P. Etude de l'influence des noyaux vestibulaires et en particulier des noyaux de Deiters sur la réactivité tendineuse. (Study of the influence

of the vestibular nuclei, and particularly the nuclei of Deiters, on tendon reflexes.) *Arch. int. de méd. exper.*, 1932, 7, No. 2. Extract, pp. 40.—The author, after having found that the knee reflexes in the decerebrate cat were not abolished, as in man, but strongly modified by medullary section, examined the influence of the vestibular nuclei by experimental lesion and autopsy. The reflexes of spinal type appear when the influence of Deiters' nucleus is suppressed. The abolition of tonus appears to be the cause of the modification of the reflex.—(Courtesy *Année psychol.*)

2986. Meyer, M. F. Frequency, duration and recency vs. double stimulation. *Psychol. Rev.*, 1934, 41, 177-183.—Meyer's fundamental law of learning is the law of "double stimulation," i.e. "If S_1 and S_2 are the sensory points for existing reflexes whose motor points are M_1 and M_2 , then if S_2 is stimulated after S_1 the current passes to M_1 , finding less resistance than over the 'natural' path to M_2 ." Having formulated this before Pavlov's conditioned reflex law was introduced into psychology, he offered it in place of the "meaningless" laws of frequency, recency and duration.—A. G. Bills (Chicago).

2987. Misbach, L. E. A new measure of tonus. *Psychol. Bull.*, 1933, 30, 659.—Abstract.—J. F. Dashiell (North Carolina).

2988. Mitchell, E. D., & Mason, B. S. The theory of play. New York: A. S. Barnes, 1934. Pp. 554. \$2.80.—R. R. Willoughby (Clark).

2989. Müller-Neff, M. Der Rossolimosche Reflex und seine klinische Bedeutung. (The Rossolimo reflex and its clinical significance.) Zeulenroda i. Thür.: Oberreuter, 1932. Pp. 19.—R. R. Willoughby (Clark).

2990. Newhall, S. M. Influence of the reporting response on the subject's report. *Psychol. Bull.*, 1933, 30, 685.—Abstract.—J. F. Dashiell (North Carolina).

2991. Perez-Cirera, R. Muskelermüdung und Eigenreflexe, zugleich ein Beitrag zur Erklärung der Hemmungsphase. (Muscular fatigue and characteristic reflexes, with a contribution to the explanation of the inhibitory phase.) *Zsch. f. Biol.*, 1932, 92, 348-354.—A research on the Achilles reflex in man, showing the inhibitory phase of action currents immediately following the action current of the reflex. A study is made of the influence of static fatigue on the action currents of the arm muscles, with the intervention of vibratory stimulations, which mask the beginning of fatigue. If the frequency used is not too high, action currents of the same rhythm as the vibrations can be inserted, particularly when the muscle is fatigued.—(Courtesy *Année psychol.*)

2992. Perkins, E. B. Color changes in animals. *Scient. Mo.*, 1934, 38, 264-266.—The chromatophores, or pigment-containing cells, which contrast or expand to produce color changes, and which have long been known to be under the control of the nervous system, have more recently been found in invertebrates as well as vertebrates to be controlled also by hormones.—J. F. Dashiell (North Carolina).

2993. Porter, J. P. A comparative study of some measures of persistence. *Psychol. Bull.*, 1933, 30, 664.—Abstract.—J. F. Dashiell (North Carolina).

2994. Razran, G. H. S. Conditioned withdrawal responses with shock as the conditioning stimulus in adult human subjects. *Psychol. Bull.*, 1934, 31, 111-143.—To throw more light on the controversy between the optimistic and the pessimistic as regards the value of this C-R as method and as explanatory concept, the author reviews 33 experiments in modified historical order under the heads: earlier experiments from Bekhterev's laboratory, later experiments from the same, and experiments from other laboratories. He concludes that "while the withdrawal response to an electric shock is undoubtedly most useful in animal conditioning . . . its general value as a method for the discovery of the laws of conditioning in adult human beings is extremely limited."—J. F. Dashiell (North Carolina).

2995. Rendu, R. Réflexe masticato-sudoral localisé. (The masticatory-sudoral reflex localized.) *J. de méd. de Lyon*, 1932, 13, No. 302, Aug. 5.—With old facial wounds, in the course of mastication perspiration in front of the ear on the wounded side is observed, the zone of hyperhidrosis being limited to a part of the area of the auriculotemporal nerve and accompanied by defective sensitivity. The author attributes this phenomenon to a sort of secretory synesthesia; as a result of thyroid disturbances, the nervous impulse destined for the masticatory fibers of the inferior maxillary nerve diffuses in the excito-sudoral fibers of the sympathetic accompanying the auriculotemporal branch of this nerve, resulting in an association of the movements of mastication and of secretion.—(Courtesy *Année psychol.*)

2996. Ricci, A. Possibilità di movimenti contemporanei con ritmo differente. (Possibility of simultaneous movements with different rhythms.) *Scritti onore Kiesow*, 1933, 133-134.—The subjects reacted with two movements in accordance with the beating of two metronomes. Subjects chosen at random could not execute the two movements simultaneously with the metronomes. Pianists could make one movement in accord with the given rhythm and the other in accord with a spontaneous rhythm, or both movements in accord with spontaneous rhythms. Only an orchestra director was at times able to follow the two metronomes.—R. Calabresi (Rome).

2997. Rosenzweig, S. The recall of finished and unfinished tasks as affected by the purpose with which they were performed. *Psychol. Bull.*, 1933, 30, 698.—Abstract.—J. F. Dashiell (North Carolina).

2998. Rupp, H., & Baranowski, P. Ueber die Kraft des Menschen bei verschiedener Glieder- und Körperstellung. (Muscular strength in different parts of the body and in various bodily positions.) *Psychotechn. Zsch.*, 1933, 8, 123-131.—The problem of human strength in general, and of strength in different parts of the body, and in different positions, is fundamental to the scientific study of the laborer and his

efficiency. Practically we should know how much muscular strength may be expected and required from the average worker. Such a knowledge is also advantageous, even necessary for the construction of tools and machines, in order to have them comply with natural conditions. Tools properly made must prevent the waste of effort and energy. Again, in order to obtain optimum efficiency in muscular work we must know in what bodily positions the worker is able to perform with the smallest waste of energy. In order to obtain some light on this problem, Rupp carried out a series of strength tests and calculated an average for strength in the hands in grasping, and an average for strength in the arms under different positions. In this article the author discusses the problem and describes his methods of measurement. He also gives the data from his tests of the hands. The report is to be continued in the following number of this journal.—C. Burri (Chicago).

2999. Rupp, H., & Harnack, W. Über Atmung beim Arbeiten. (Breathing during work.) *Psychotechn. Zsch.*, 1933, 8, 111-123.—The problem is: how do various conditions influence normal breathing? Many breathing curves were constructed for six subjects, under varying conditions. Kymographic breathing records were made while the subjects were operating a typewriter, while performing additions, and while copying lines. Each of these tasks was further varied by using different material for typing, or by enforcing definite work rhythms or unnatural working positions. Finally, breathing was tested during conversation, singing, sleep, and waking. This article gives a description of the problem, method, apparatus, and procedure of the experiments with typewriting and with copying lines. About 20 different breathing curves are given. The findings so far seem to indicate that breathing curves vary from task to task.—C. Burri (Chicago).

3000. Sandvoss, H. Über die Beziehungen von Determination und Bewusstsein bei der Realisierung unerledigter Tätigkeiten. (The relation of determination and consciousness in connection with the completion of unfinished acts.) *Arch. f. d. ges. Psychol.*, 1933, 89, 139-192.—A total of nine subjects were interrupted in various tasks with nonsense syllables. From their subsequent behavior and introspective reports, it was found not merely that a determination to finish such tasks results from the "unfinishedness," but that it is also conditioned by the attitude of the subject toward the task. The chief cause for a strong determination proved to be a subjective feeling that the task needed to be completed. The fact that this feeling persists much longer in some subjects than in others seems to be dependent upon how seriously the subject assumes the task, which in turn is thought to be related to the temperament of the individual.—E. L. Kelly (Connecticut State College).

3001. Schmitz, W., & Schaefer, H. Aktionsstrom und "Anodenschwung" des Elektrotonus. (Action current and the "anode oscillation" of electrotonus.) *Pflüg. Arch. f. d. ges. Physiol.*, 1933, 232, 773-781.—B. F. Skinner (Harvard).

3002. Schmitz, W., & Schaefer, H. Die Entwicklung des Elektrotonus innerhalb der ersten Sigma. (The development of electrotonus within the first sigma.) *Pflüg. Arch. f. d. ges. Physiol.*, 1933, 232, 782-797.—The development of electrotonus observed with constant current and a cathode-ray oscillograph follows an exponential curve. This fact points to the charging of a definite double-layer capacity of $3-4 \cdot 10^{-3}$ microF.—B. F. Skinner (Harvard).

3003. Seward, G. H. Effects of the menstrual cycle on reactions to electric shock. *Psychol. Bull.*, 1933, 30, 661-662.—Abstract.—J. F. Dashiell (North Carolina).

3004. Skinner, B. F. The rate of establishment of a discrimination. *J. Gen. Psychol.*, 1933, 9, 302-350.—A study was made of the establishment of a discrimination which consisted of the continued reinforcement of one reflex and the concurrent extinction of another, and in which the two stimuli possessed properties in common but also differed in some significant respect. In a controlled experimental box, a rat may depress a lever which may or may not deliver a pellet of food to the rat. If the response to the lever is periodically reinforced with a pellet of food, while all intervening responses are extinguished, the successive separate extinction curves eventually fuse, and a constant rate of elicitation may be maintained for as long as 24 hours. The constant rate of elicitation is a function of the frequency of reconditioning. The extent of the effect of the reconditioning of a related reflex upon extinction varies as the strength of the extinguished reflex. Reasons are given for using the method described.—H. Cason (Wisconsin).

3005. Skinner, B. F. "Resistance to extinction" in the process of conditioning. *J. Gen. Psychol.*, 1933, 9, 420-429.—The two changes which occur during the formation of a conditioned reflex are an increase in the immediately observed strength of the reflex and an increase in its resistance to extinction. In many cases the latter is a preferable measure of the presence or absence of an effect. The reinforcement of a single response may be followed by a significant curve of extinction. The curve serves as a measure of the amount of conditioning taking place. A complicating change sometimes observed in the rate of elicitation prior to specific reinforcement is described and discussed. The effect of a single reinforcement is still readily observable. In explaining the change, a record for secondary extinction (simultaneous conditioning and extinction) is described.—H. Cason (Wisconsin).

3006. Smith, F. O. Repetition without knowledge of results as a factor in learning. *Psychol. Bull.*, 1933, 30, 673-674.—Abstract.—J. F. Dashiell (North Carolina).

3007. Steckle, L. C. A trace conditioning of the galvanic reflex. *J. Gen. Psychol.*, 1933, 9, 475-480.—The substitute stimulus was a light, the natural stimulus was an electric shock, and a genuine conditioned galvanic trace response was established.—H. Cason (Wisconsin).

3008. Steinhausen, W. Ueber die Wittmaacksche Turgor- und Drucktheorie und die Mach-Breuer Theorie der Verlagerung der Cupula terminalis in den Bogengängen des Vestibularapparates. (On the Wittmaack theory of turgescence and pressure, and the Mach-Breuer theory of the displacement of the terminal cupule in the canals of the vestibular apparatus.) *Arch. f. Ohrenhk.*, 1932, 132, 134-166.—Wittmaack had cited experiments which he believed afforded support for the theory of excitation of the labyrinthine cupula by changes in pressure or turgescence. The experiment of Meurman was cited as crucial. In this experiment a cannula had been introduced into the bony labyrinth of the rabbit and pressure exerted in the perilymph. Labyrinthine excitation with nystagmus resulted. Wittmaack had insisted that displacement of the crest could not be a causal factor in this case. Steinhausen finds that if injections of 5 cc. (following Meurman) acted on the hydrostatic pressure without movement of the liquid, the pressure exerted would be 50 million atmospheres.—(Courtesy *Année psychol.*)

3009. Sustmann, C. Eine neue erfolgreiche Methode der Anlernung für Geschwindigkeitsarbeit durch Beeinflussung des subjektiven Zeitmassstabes. (A new successful method of training for speed work by influencing the subjective time measure.) *Psychotechn. Zsch.*, 1933, 8, 139-149.—The aim of this article is to demonstrate a method of training for speed in work by influencing the subjective time measure or standard of estimating time. This was accomplished by means of the minute-clock, which was adjusted so that during the progress of training the minutes became progressively shorter; this was done so gradually that the subjects were quite unaware of the process, and so that they did not lose their confidence in their ability. By this procedure it was possible to increase the speed of work 27% for laboratory activities and 19% for work performed in the shop.—C. Burri (Chicago).

3010. Thorndike, E. L. A theory of the action of the after-effects of a connection upon it. *Psychol. Bull.*, 1933, 30, 672-673.—Abstract.—J. F. Dashiell (North Carolina).

3011. Thurstone, L. L. The error function in maze learning. *J. Gen. Psychol.*, 1933, 9, 288-301.—The author describes a method of dealing with maze-learning data so as to reveal functional continuities that are not readily discovered by the customary methods of analyzing maze data. The method will enable one to estimate the learning ability of the subject even though he has not completely mastered the maze, to estimate the number of errors that may be attributed to exploration rather than to learning, to express quantitatively the relative difficulties of several mazes even though none of them are completely mastered, and to estimate the number of errors that would be required for complete mastery of the maze. The author's learning equation is transposed to the variables that are customary in maze learning, namely, errors and trials, and he describes the device of plotting the errors in cumula-

tive form so as to reveal functional continuity in learning.—H. Cason (Wisconsin).

3012. Uexküll, J. v. *Hat es einen Sinn von Tonusmuskeln und Tetanusmuskeln zu sprechen?* (Should we speak of tonic and tetanic muscle?) *Pflüg. Arch. f. d. ges. Physiol.*, 1933, 232, 842-847.—B. F. Skinner (Harvard).

3013. Waters, R. H. *The specificity of knowledge of results and improvement.* *Psychol. Bull.*, 1933, 30, 673.—Abstract.—J. F. Dashiell (North Carolina).

3014. Wolfe, D. L. *The effect of variations in maze size.* *Psychol. Bull.*, 1933, 30, 676.—Abstract.—J. F. Dashiell (North Carolina).

3015. Wolfe, H. M. *The optimal time order for conditioning.* *Psychol. Bull.*, 1933, 30, 677.—Abstract.—J. F. Dashiell (North Carolina).

3016. Young, P. T. *An analysis of "drive."* *Psychol. Bull.*, 1933, 30, 657.—Abstract.—J. F. Dashiell (North Carolina).

3017. Zimmer, O. *Perseveration, Einstellung und Bereitschaft.* (Perseveration, tendency, and readiness.) Bonn: Bonner Univ. Buchdr., 1933. Pp. 70. RM. 2.00.—R. R. Willoughby (Clark).

[See also abstracts 2887, 2890, 2959, 2960, 3019, 3039, 3044, 3054, 3059, 3069, 3120, 3217, 3245, 3317, 3345, 3355.]

PLANT AND ANIMAL BEHAVIOR

3018. Bajandurow, B. I. *Zur Physiologie des Sehanalysators bei Vögeln.* (On the physiology of the visual analyzer in birds.) *Zsch. f. vergl. Physiol.*, 1932, 18, 298-306.—The leg extension response of a harnessed bird was first conditioned (e.g. in 39 trials) to an illuminated circle which was presented with the induction shock. Then an ellipse with very unequal axes was presented on occasional trials without shock, intermittently with the circle. When the bird no longer responded as to the circle, there were presented ellipses that more and more closely resembled the circle, and differentiation between circle and each new ellipse required fewer trials than did that of the last introduction. When an ellipse very similar to the circle was at length brought before the bird, differentiation came promptly; but there followed an abrupt change in behavior, and the subject not only became very excited during the trials, but completely failed to differentiate the ellipses from the circle. A limited amount of re-training was possible only in the case of ellipses decidedly different from the circle. Similar results were obtained with two birds that were trained to the circle and then were presented with a series of angular figures that led to one of sixteen sides that closely resembled the circle.—T. C. Schneirla (New York University).

3019. Bajandurow, B. I., & Pegel, W. A. *Der bedingte Reflex bei Fröschen.* (The conditioned reflex in frogs.) *Zsch. f. vergl. Physiol.*, 1932, 18, 284-297.—Conditioned responses (breathing changes, jumping) were readily obtained by presenting auditory stimuli (whistle tones) or lights with a shock stimulus. But the conditioned responses were highly

unstable, and experimental extinction came quickly, although re-establishment was attained readily through further reinforcement. Seldom were the effects of conditioning evident on a following day. For successful results it was found necessary to present the stimuli coincidentally, since conditioning was highly unstable and usually failed if an interval of 2-5 seconds separated sound (or light) and shock. It was not possible to set up differential conditioned responses to lights (filtered) of different values, nor could this be done for different auditory stimuli.—T. C. Schneirla (New York University).

3020. Ball, J. *Sex activity and the menstrual cycle in the monkey.* *Psychol. Bull.*, 1933, 30, 660-661.—Abstract.—J. F. Dashiell (North Carolina).

3021. Barnes, T. C., Sell, J. P., & Spofford, W. *Responses of a teratological crustacean limb to electrical stimulation.* *Zsch. f. vergl. Physiol.*, 1932, 18, 280-283.—"An anomalous walking limb of the common lobster, in which a supernumerary movable double dactylus is present, is described. The extra digit induces its musculature from the normal flexor and the latter loses its ability to respond to stimulation through the nerve. The excitability of the normal extensor becomes that characteristic of the flexor."—T. C. Schneirla (New York University).

3022. Bierens de Haan, J. *Über das Suchen nach verstecktem Futter bei einigen Procyoniden und einem Eichhörnchen.* (On the searching for concealed food by some Procyonidae and a squirrel.) *Zsch. f. vergl. Physiol.*, 1932, 17, 279-303.—The subjects in this experiment were two coatis, two raccoons, and one squirrel. In each test food was concealed before the subject's eyes, and he was graded on the basis of his ability to locate the place directly afterward, and on his ability to obtain the food. The squirrel failed to search unless the food had been concealed fairly close at hand, and failed when the food was hidden in a less accessible place (e.g. in the experimenter's pocket or in a hanging box). On the basis of ability to understand the means of obtaining the food, once it was located, the adult coatis stood highest, the raccoons next, and the young coati did better than the squirrel. (In this respect the adult coati and the raccoons compared favorably with the lemurs and with certain of the monkeys used in a previous experiment, but were excelled by the best monkeys.) Overturning a flower pot was an easily understood problem, solved in "primary" fashion even by the squirrel, while pulling out a sliding drawer was the most difficult.—T. C. Schneirla (New York University).

3023. Borri, C. *Equilibrio e moto dei vertebrati acquatici anguilliformi.* (Equilibrium and movement in eel-like aquatic vertebrates.) *Atti soc. Toscana sci. nat. mem.*, 1930, 40, 42-50.—(Biol. Abst. VIII: 5836).

3024. Brody, B. S., & Dusser de Barenne, J. G. *Effect of hyperventilation on the excitability of the motor cortex in cats.* *Arch. Neur. & Psychiat.*, 1932, 28, 571-585.—Out of 100 cases, 62 gave a slight increase of cortical responses with hyperventilation,

38 showed no change. But the effect was made more apparent and constant by injection of a non-convulsive dose of strychnine. The cortical responses were increased, their latency diminished (they consist of consecutive epileptoid discharges). The effect is the same if there is a local application of strychnine in the region of stimulation. Hyperventilation removes the oscillations of cortical excitability normally found, and leaves, when it has stopped, a temporary depression of excitability (lasting 4 or 5 minutes).—(Courtesy *Année psychol.*)

3025. Buddenbrock, W. v., & Friedrich, H. Ueber Fallreflexe von Arthropoden. (On the falling reflex in arthropods.) *Zool. Jahrb., Physiol.*, 1932, 51, 131-148.—Many arthropods turn in the course of their fall and reach the ground on their feet (for example Orthoptera, such as *Meconema*, *Dixippus*, and *Forficula*, and spiders like *Phalangium*, etc.). A purely mechanical cause seems to operate, due to the dorsal position of the wings, but reflexes of tactile origin, stimulated by the resistance of air, also participate. The authors point out three of these tactile reflexes of falling, the first of which determines the characteristic position of flight, with feet spread and back raised.—(Courtesy *Année psychol.*)

3026. Casper, B. The normal sensory control of the perfected maze habit of the albino rat. *Psychol. Bull.*, 1933, 30, 702-703.—Abstract.—J. F. Dashiell (North Carolina).

3027. Cosmetatos, G., Dontas, M. S., & Kotsaftis, A. Modifications morphologiques de la rétine de la grenouille adaptée à la lumière et à l'obscurité. (Morphological modifications of the retina of the frog adapted to light and to darkness.) *XIV Cong. int. di fisiol., Sunti*, 1932, 59.—A method is described of continuous coloration modifications and particularly important changes of color in different retinal elements of frogs exposed to light or adapted to darkness, and of a reversible functional character.—(Courtesy *Année psychol.*)

3028. Dykgraaf, S. Über Lautäusserungen der Elritze. (On production of sound by the minnow.) *Zsch. f. vergl. Physiol.*, 1932, 17, 802-805.—Minnows produce sounds under water, through the release of gas from the swim bladder. These effects appear to have a biological significance, since minnows are sensitive to them.—T. C. Schneirla (New York University).

3029. Faurot, L. Actinies et pagures. Etude de psychologie animale. (Sea-anemones and hermit-crabs. A study in animal psychology.) *Arch. de zool. exper.*, 1932, 74, No. 8, 139-154.—Description of the beginning of the fixation of a *Sagartia parasitica* on the shell of a *Pagurus striatus*. The fixation is made at the initiative of the crab, but by the maneuvers of the *Sagartia* itself. Association with the anemone is not necessary to *Pagurus striatus*, which withdraws entirely into its shell; association with *Adamsia palliata* seems indispensable to the life of *Eupagurus prideauxi*, which is largely covered by the anemone, and owes to it more flexibility and mobility with a lighter covering. Here again the

crab initiates the association, but it also maneuvers itself to assure fixation on the shell.—(Courtesy *Année psychol.*)

3030. Ferguson, J. H., & Fulton, J. F. The motor cortex of the black bear and the results of extirpating the motor representation of the hind foot. *XIV Cong. int. di fisiol., Sunti*, 1932, 78-79.—Electrical determination of the cortical motor localizations of a specimen of *Ursus americanus*, then extirpation of the cortex at the level of the motor region for the hind foot (a more extensive region than in the cat or dog, called the lozenge of the bear). The motor deficiencies shown are particularly lasting. The toes on the opposite side showed a marked tendency to spread. Extirpation in the opposite hemisphere was made at the end of three months.—(Courtesy *Année psychol.*)

3031. Franz, V. Auge und Accommodation von *Petromyzon (Lampetra) fluviatilis*. (Eye and accommodation of *Petromyzon (Lampetra) fluviatilis*.) *Zool. Jahrb., Physiol.*, 1932, 52, 118-178.—The eye of the lamprey is mobile under the external cornea, and is chiefly characterized by the fact—which has never been established with any other animal—that it is capable of affording accommodation on both sides, and to a considerable degree (20 diopters at least on each side), which is a large margin (apparently superior to all the animal's needs). The eye muscles surrounding the ball, with very distal insertion, have the effect of compressing and elongating the eye in the course of their contraction and of removing the retina from the crystalline, while the corneal muscle, which flattens the cornea, brings the crystalline closer to the retina.—(Courtesy *Année psychol.*)

3032. Frisch, K. v., & Stetter, H. Untersuchungen über den Sitz des Gehörsinnes bei der Elritze. (Experiments on the localization of auditory sensitivity in the minnow.) *Zsch. f. vergl. Physiol.*, 1932, 17, 686-801.—Blinded minnows were trained to give the food response to stimuli from an Engelmann whistle or to tuning-fork stimuli (Stetter method). Bilateral extirpation of the utriculi did not impair the auditory sensitivity involved, although at first it definitely disturbed control of equilibrium. Minnows subjected to bilateral destruction of sacculus and lagena (operation through the opercular apertures) were insensitive to vibrations between 150 v. d. and 5500 v. d., the latter value representing the approximate upper stimulus threshold in normal hearing. Unilateral removal of the pars inferior, however, did not affect auditory sensitivity. Bilateral destruction of the pars inferior reduced sensitivity to vibrations of 32 v. d. and 65 v. d. to about 1/250th normal efficiency, but for vibrations near the lower stimulus threshold (ca. 16 v. d.) sensitivity was but slightly impaired by this operation. Cutting the nerve supply of the lateral-line system did not affect sensitivity to these slow vibrations. Skin sensitivity cannot be controlled satisfactorily in fishes, but from the evidence for man it is concluded that these blinded minnows which lacked inner ears and

lateral-line apparatus were responding to cutaneous effects set up by the slow vibrations. Removal of the swim bladder slightly reduced the effectiveness of training to stimuli within the range of sensitivity; hence it is concluded that the bladder, through the Weberian apparatus, must increase the acuity of audition in normal fishes.—T. C. Schneirla (New York University).

3033. Fulton, B. B. Inheritance of song in hybrids of two subspecies of *Nemobius fasciatus* (Orthoptera). *Ann. Entom. Soc. Amer.*, 1933, 26, 368-376.—Throughout most of the geographic range of the cricket, *Nemobius fasciatus*, three subspecies occur, namely *N. f. socius*, *N. f. fasciatus* and *N. f. tinnulus*. The three subspecies have slight morphological and color differences when the average condition of each in respect to certain characters is considered, but some individuals are intermediate and classification of dead specimens is difficult. Physiologically the subspecies differ in the song of males, and occupy different ecological environments; and *socius* has more than one generation per year in the south, while the others are single-brooded. By pairing virgin females with males of a different subspecies it was found that when confined together they would mate. No offspring were obtained in any crosses involving *socius*, but hybrids were obtained from nearly all crosses of the other two subspecies. The song of *fasciatus* and *tinnulus* is a rapid series of single-stroke chirps, but the former has about twice the frequency of the latter at the same temperature. The hybrids had an intermediate rate of song. Hybrids were mated and a few were back-crossed with parent stock. The F_1 generation was also intermediate in song rate, but a few individuals approached the condition of the parent stock. Results indicate that more than one determiner is involved in the inheritance. No such intermediate song rates have been observed in nature, and it is concluded that the three subspecies seldom if ever interbreed under natural conditions and that they are physiologically distinct, even though intergrading morphologically.—B. B. Fulton (Raleigh, N. C.)

3034. Fulton, J. F. An experimental analysis of the evolution of cortical dominance in Primates. *XIV Cong. int. di fisiol., Sunti.*, 1932, 88.—The author removed the cortical leg area in four species of monkeys (macaques), baboons, gibbons (2 species), and chimpanzees. The return of voluntary movement in the toes occurs very early in the first (after 3 to 8 days), and much later in the last (36 days for the gibbons, 45 for the chimpanzees); the patellar reflexes never disappeared in the first, and soon returned in the others; the Babinski reflex appeared temporarily in the gibbon, permanently in the chimpanzee. This indicates a series of stages of pyramidal dominance.—(Courtesy *Année psychol.*)

3035. Giersberg, H. Der Einfluss der Hypophyse auf die farbigen Chromatophoren der Elritze. (The influence of the hypophysis on the colored chromatophores of the minnow.) *Zsch. f. vergl. Physiol.*, 1932, 18, 369-377.—The hypophysis secretes a substance

which, released into the blood, produces coloration changes through expansion of the lipophores. This function is neurally controlled, since color changes were very irregular when the nerve supply of the hypophysis was severed. Partial destruction of the gland impaired coloration, while its complete removal changed the skin to a permanent drab gray. Experiments in which infundin was flooded into the blood stream brought results which included irregular successions of reds and yellows in skin coloration, a picture of unregulated activity of the hypophysis.—T. C. Schneirla (New York University.)

3036. Hatai, S., & Abe, N. The responses of the catfish, *Parasilurus asotus*, to earthquakes. *Proc. Imp. Acad., Tokyo*, 1932, 8, 375-378.—(*Biol. Abst.* VIII: 5826).

3037. Hoagland, H., & Berkovich, L. On the neurological basis of the localized response to irritants on the skin. *J. Gen. Psychol.*, 1933, 9, 365-376.—Progressive chemical destruction of sensory endings in frog's skin produced a corresponding failure of the ability of the animal to localize to irritants (15% acetic acid) placed on the skin. Rapid A-type impulses of high potential in cutaneous nerves were apparently necessary in order to elicit specifically localized responses of frogs to cutaneous irritants. Only crude localization was shown when impulses were of the B- and C-types. The time elapsing between the application of a chemical irritant which slowly destroys sensory endings and the reaction to the irritant increased with successive applications of the stimulus. An unspecifically localized avoidance reaction occurred after several applications of the irritant and in the absence of all A-type impulses. The reaction does not depend upon the frequency of discharge of the nerve impulses, but rather appears to be determined by a threshold total number of impulses of the B- or C-type which have been set up in the time between the application of the stimulus and the response.—H. Cason (Wisconsin).

3038. Hoffman, R. Zur Analyse des Reflexgeschehens bei *Blatta orientalis* L. (The analysis of reflex occurrences in *Blatta orientalis* L.). *Zsch. f. vergl. Physiol.*, 1933, 18, 740-795.—The conditions of arousal, and the external and internal factors that cause certain reflex activities to be modified, were studied in the cockroach. Detailed analysis of four types of activity was undertaken. For instance, as components of the "righting reaction" were found convulsive movements of the legs, extension and supporting activities of the rear legs, and the bending of the anterior part of the body. The releasing stimuli come through the cessation of normal contact and of pressure on the extremities. The "stretching reaction" of the body, and the "parrying reflexes" of the extremities were studied, and detailed attention was given to the "cleaning reflexes." The role of contact stimulation in the normal elicitation of antennal cleaning was studied by means of artificial stimulation. Tactual stimulation of antennae or mouth-parts or the pressure of a detached antenna called out the act or its modification. The close

relationship of this act to eating is shown by cases in which the foreign antenna is eaten instead of being cleaned. The cleaning act was found to continue in cases when antennae or legs did not make contact with mouth parts, or when an inaccessible part of the body was stimulated. Light was thrown upon the phenomena of reflex control by experiments that involved varying strengths of artificial stimulation, and by the manner in which the amputation of bodily parts altered the act.—T. C. Schneirla (New York University).

3039. Hull, C. L. The concept of the habit-family hierarchy and maze learning: Part II. *Psychol. Rev.*, 1934, 41, 134-152.—Further deductions from the principle of the habit-family hierarchy. Twenty are listed, relating chiefly to the situations in which a rat in a maze chooses (1) the longer or shorter path, and (2) the blind path pointing toward the goal or the direct path pointing away. Several of the deductions have been verified on the basis of experimentation. The rest are capable of such verification.—A. G. Bills (Chicago).

3040. Ilse, D. Eine neue Methode zur Bestimmung der subjektiven Helligkeitswerte von Pigmenten. (A new method for determining values of subjective brightness of pigment colors.) *Biol. Zentbl.*, 1932, 52, 660-667.—The butterfly *Vanessa io* visited only colored surfaces in this study. In using colored rings placed on gray Hering paper, the author noted that the percentage of visits to a given ring increased with the contrast of the brightness of the color with the background, brighter or darker. For each color the minimum of visits corresponds to a given gray, considered as of equal brightness, which furnished the value of the subjective brightness of the colored paper for the butterfly. In twilight vision the values of brightness of the colored papers for man are nearly the same as those for the butterfly.—(Courtesy *Année psychol.*)

3041. Kahmann, H. Sinnesphysiologische Studien an Reptilien. I. Experimentelle Untersuchungen über das Jakobsonsche Organ der Eidechsen und Schlangen. (Studies of sensory physiology in reptiles. I. Experimental researches on the organ of Jacobson in lizards and serpents.) *Zool. Jahrb., Physiol.*, 1932, 51, 173-237.—The organ of Jacobson, which empties and refills from the contents of the buccal cavity, serves for alimentary smell and for orientation to prey, acting in a different manner from smell properly so-called. Alimentary chemical orientation disappears with its suppression. The organ functions as follows: the tongue, exploring the environment, receives the odorous particles and introduces them into the organ of Jacobson, and the chemical information thus received from various directions in space enables the animal to orient in its search for prey.—(Courtesy *Année psychol.*)

3042. Kennard, M. A., & Fulton, J. F. A study of the cortical representation of the lower extremities in the gibbon. *XIV Cong. int. di fisiol., Sunti.*, 1932, 133.—The upright posture of the gibbon lends particular interest to the cortical representation of

its lower extremities. In two *Hylobates*, one *H. agilis* and one *H. leucogenys*, the authors removed at two different times determined cortical leg areas of the two sides. Following unilateral operation hemiplegia is severe, and the Babinski reflex appears for several days, then motor recovery occurs, except in the toes, which are still paralyzed at the end of 35 days; the second operation brings about a bilateral Babinski, with no change at the end of 4 months. By comparison with various apes, the gibbon is placed, from the standpoint of cortical dominance, between the chimpanzee and the macaque.—(Courtesy *Année psychol.*)

3043. Kolmer, W. Ueber das Sagittalorgan, ein zentrales Sinnesorgan der Wirbeltiere, insbesondere beim Affen. (On the sagittal organ, a central sensory organ of vertebrates, especially in the ape.) *Zsch. f. Zellforsch. u. mikr. Anat.*, 1931, 13, 236-248.—The sagittal organ here consists of a zone of ependymal lining of the third ventricle, below the posterior commissure, characterized by upright epithelial cells terminated by a whip, a filiform formation which floats freely in the epithelial canal, extending to the caudal region (the filament of Reissner), and finally the primary sensory cells, scattered in the ependymal epithelium. The author believes that the organ has a reflexogenous rôle opposing the excessive flexions of the medulla.—(Courtesy *Année psychol.*)

3044. Lang, J. Die Stimulation des Bewegungsreflexes bei dekapitierten *Carausius morosus* R. und *Tenebrio molitor* L. durch Temperaturreizung der Tarsalglieder. (The excitement of reflex movement in decapitated *Carausius morosus* R. and *Tenebrio molitor* L. by thermal stimulation of the tarsus.) *Biol. Zentbl.*, 1932, 52, 582-584.—By heating to 43-48° the boxes containing a phasmod and a coleopteran, after decapitation, in an open thermostat, coordinated movements of the front and the rear are often obtained, also elevation of the abdomen and the feet. These movements depend on the thoracic ganglions, for they persist following removal of the subesophageal ganglions, which had not been touched by the decapitation.—(Courtesy *Année psychol.*)

3045. Maréchal, P. Recherches sur deux Osmies communes: *Osmia cornuta* Latr. et *O. rufa* L. (Studies of two common Osmias: *Osmia cornuta* Latr. and *O. rufa* L.) *In Soc. entom., Livre du Centenaire*, 1932, 505-512.—These two Osmias have identical nests, built in various places, walls, wood, galls, etc. The author compared in particular their methods of mating and its preliminaries, which consist largely of stroking with the antennae. Artificial feeding with water added to honey presented in drops at the end of a rod soon induced the habit of hurrying toward the rod at its approach. A male enclosed in a muslin cage, having found a minute hole, escaped. Brought back, he returned immediately to the outlet and got out on four occasions.—(Courtesy *Année psychol.*)

3046. Martini, E., & Teubner, E. Ueber das Verhalten von Stechmücken besonders von *Anopheles maculipennis* bei verschiedenen Temperaturen und Luftfeuchtigkeiten. (The behavior of mosquitoes,

especially of *Anopheles maculipennis*, under different temperatures and humidities.) Leipzig: J. A. Barth 1933. Pp. 80. RM. 6.—The authors report results obtained from a comparative study of the influence of temperature and humidity on the behavior of certain species of mosquitoes under laboratory and field conditions. The species studied showed preferences for certain combinations of temperature and humidity. Differences in duration of life under varying combinations were demonstrated, but temperature and humidity were not found to be the most important controlling factors in the field studies.—A. B. Hunter (Clark).

3047. Martino, G. Su alcuni fenomeni elettrici della zona corticale sensitivo-motrice del cane. (On some electrical phenomena of the sensory-motor cortical zone in the dog.) *Arch. di sci. biol.*, 1931, 16, 160-182.—Using a capillary electrometer, differences in potential between the rolandic areas and other cortical points may be observed. Strychnine increases and chloroform diminishes the potential. Cutaneous stimulation on the corresponding side gives an increase which is diminished when that side is anesthetized. Potential differences between rolandic zones of the two hemispheres increase with cutaneous stimulation of one side and diminish with that of the other. Differences in potential seem to indicate inequalities of functional activity.—(Courtesy *Année psychol.*)

3048. Mast, S. O. The rate of adaptation to light and to darkness in *Volvox globator*. *Zsch. f. vergl. Physiol.*, 1932, 17, 644-658.—The "reaction time" (time required for newly exposed *Volvox* colonies to become positive) was measured under a number of conditions. Reaction time, it was found, increases to a maximum, then decreases, as colonies are kept longer in the dark following periods of 1-2 hours in the light. As the intensity of light is increased, the reaction time of the dark-adapted colony first decreases and then increases. A relatively long darkness exposure is necessary to neutralize the effects of a short period in the light. To account for all of the facts, it is necessary to assume the existence of three interrelated pairs of photochemical substances. Luntz's theory is inadequate.—T. C. Schneirla (New York University).

3049. Merker, E., & Gilbert, H. Das Sehvermögen unserer Süßwasserplanarien im langwelligen Ultraviolett. (The vision of fresh-water planarians in ultra-violet light of long wave-length.) *Zool. Jahrb., Physiol.*, 1932, 51, 441-504.—Ultra-violet light arouses the negative reaction of flight in *Planaria gonocephala* and *Polycelis nigra*, a reaction that is not aroused by dim fluorescent light. If blinded or decapitated, the worms still react, but with less precision, ocular regeneration bringing the return of the initial precise reaction. The planarians cannot follow a line of equal irradiation between two sources of ultra-violet, but they can follow a line of similar luminosity between a source of visible light and a source of ultra-violet of sufficiently great wave length, approaching violet. These experiments agree in

showing the luminous character, for *Planaria*, of stimulation by ultra-violet.—(Courtesy *Année psychol.*)

3050. Minnich, D. E. The contact chemoreceptors of the honey bee *Apis mellifera* L. *J. Exper. Zool.*, 1932, 61, 375-393.—Alimentary responses are obtained with bees when a sufficiently concentrated solution of saccharose is placed in contact either with the antennae (which can perhaps even perceive the sugar at a certain distance) or with the front feet (the responses being positive in only a tenth of the cases with the third pair of feet); with solutions of lactose the response is weak. The bee therefore possesses gustatory apparatus (or chemical, of contact) in the feet and the antennae, besides the buccal region.—(Courtesy *Année psychol.*)

3051. Monod, J. Données quantitatives sur le galvanotropisme des infusoires ciliés. (Quantitative data on galvanotropism in ciliated infusoria.) *Bull. biol.*, 1933, 57, 474-479.—Experiments were made on a pure culture of *Glaucoma pyriformis* placed in distilled water. A normal cathodic galvanotropism took place. If the infusoria were subjected to various electric fields (from 1 to 6 volts), it was found that the speed peculiar to the infusoria was invariable (0.55 mm. per sec.) but that the average orientation exhibited values which increased according to the logarithm of the strength of the field.—*Math. H. Piéron* (Sorbonne).

3052. Monod, J. Independance du galvanotropisme et de la densité du courant chez les infusoires ciliés. (Independence of galvanotropism and strength of current in the ciliated infusoria.) *C. r. Acad. sci.*, 1934, 198, 122-124.—The author measured the intensity of the galvanotropism by means of the average orientation, obtained by relating the length of the path of the various infusoria to the extent or projection on the direction of current. The experiments were performed on a pure culture of *Glaucoma pyriformis* subjected to varying media (NaCl, KCl, MgCl₂, etc.). The results showed that, whatever the conductivity of the solutions, the average orientation always varied as the logarithm of the electric field. Therefore, galvanotropism cannot be explained by the displacement of ions in the solution outside of the animal, and the ions added to the medium are able to influence tropism only to the degree that they modify the electric properties of the protoplasm inside the animal.—*Math. H. Piéron* (Sorbonne).

3053. Moorhouse, V. H. K. Reactions of fish to noise. *Contrib. Canad. Biol. & Fish.*, 1933, 7, 467-475.—(*Biol. Abst.* VIII: 5828).

3054. Mowrer, O. H. The modification of vestibular nystagmus by means of repeated elicitation. *Comp. Psychol. Monog.*, 1934, 9. Pp. 48.—A comprehensive review of the literature is followed by a report of the author's own experiments with pigeons. The animals were placed in a multiple holder surrounded by a cylinder, the inside of which possessed vertical stripes. The cylinder and the holder could be rotated in either direction, together or independently. A large number of variations in the conditions of rota-

tion were used. Although there was a reduction in nystagmus following repeated elicitation under all of the conditions used, the duration and nature of the nystagmus differed with the conditions. The greatest reduction (found for non-visual rotation) amounted to about 60%. There was no evidence to indicate that this nystagmus could be totally suppressed. When environment and animal were rotated together there was a slight nystagmus following cessation of rotation. This nystagmus completely disappeared with repeated elicitation. Of the various hypotheses concerning the reduction of nystagmus, the author believes that only two are consonant with the experimental findings. One is the hypothesis that reduction of nystagmus is learned, the other the hypothesis that reduction of nystagmus follows a disintegration of normal functioning. The data do not allow a choice between the two. Bibliography.—N. L. Munn (Pittsburgh).

3055. Muenzinger, K. F. The function of electric shock in the visual discrimination habit. *Psychol. Bull.*, 1933, 30, 703.—Abstract.—J. F. Dashiell (North Carolina).

3056. Noble, G. K., & Mason, E. R. Experiments on the brooding habits of the lizards *Eumeces* and *Ophisaurus*. *Amer. Mus. Novitates*, 1933, No. 619, 1-29.—Paraffin models of *Eumeces* eggs are rejected, and living eggs that have been shellacked are usually not attended. A blindfolded *Eumeces* will find and brood eggs even when these are placed in a foreign situation. The tip of the tongue is employed in identifying the eggs. Removing this part of the tongue prevents the female from finding the eggs. *E. fasciatus* and *E. laticeps* voluntarily leave their eggs at frequent intervals to sun themselves or to seek food. Their body temperature at this time in the laboratory ranges from 1.6° C. to 3.2° C. higher than that of their eggs. This increased body temperature apparently aids the incubation of the eggs when the ♀ returns to brood. The brooding *E. fasciatus* and *E. laticeps*, but not *Ophisaurus ventralis*, will attack mice, lizards, and snakes of moderate size that approach their eggs. The ♀ *O. ventralis* can find her eggs when these are placed in a foreign situation, but under laboratory conditions she does not increase their temperature in the manner of *Eumeces*.—(*Biol. Abst.* VIII: 7535).

3057. Nolte, W. Experimentelle Untersuchungen zum Problem der Lokalisation des Assoziationsvermögens im Fischgehirn. (Experimental inquiry into the problem of the localization of the association capacity in the brain of the fish.) *Zsch. f. vergl. Physiol.*, 1932, 18, 255-279.—Minnows and sticklebacks were trained to snap at food on a stick end before a patch of given color, and to avoid another color or other colors. After bilateral destruction of the rostral half of the forebrain, or of the entire primordium pallii, or after complete destruction of the forebrain, the fishes reacted in very much the same manner to the training color and to adjacent spectral values. A slight decrease in percentage of responses to the training color by most of the operated

animals was interpreted as an operative shock effect. When "+" was used as food signal, as against "-", forebrain injuries are reported as having had no significant effect, although the figures show an erratic postoperative performance in certain of the cases. Extensive injury to the molecular layer of the cerebellum had no effect upon learned response to a "food color." Hence it is concluded that neither forebrain nor cerebellum is essential for the associative capacity that is necessary for the performance of previously formed color responses.—T. C. Schneirla (New York University).

3058. Nowikoff, M. Ueber die morphologische Bedeutung der Sehorgane von Chordaten. (On the morphological significance of the visual organs of Chordates.) *Biol. Zentbl.*, 1932, 52, 548-565.—A review of the various types of ocular structure, on the surface (salpians), in invaginations (larvae of ascidians), and in vesicles (craniates). In a general manner the same morphogenetic process is developed in every species, reaching a more or less advanced stage, since the visual elements are diffuse until the ocular vesicle develops (with a line of derivation for the composite eyes of arthropods). This process has three fundamental aspects, differentiation, localization, and complexity.—(Courtesy *Année psychol.*)

3059. Pavlov, I. P., & Petrova, M. K. A contribution to the physiology of the hypnotic state of dogs. *Character & Personality*, 1934, 2, 189-200.—Various gradations of the hypnotic state have been observed in dogs subjected to the conditioned salivary reflex experiment, such as refusing to eat (negativism), inhibition of eating responses but with secretion functioning, delayed secretion, and modification of a therapeutic reflex (licking the paw). These dissociations are interpreted in terms of theories concerning cortical and subcortical functioning.—M. O. Wilson (Oklahoma).

3060. Rabaud, E. Construction et structure de la toile d'*Argiope bruennichi*. (Construction and structure of the web of *Argiope bruennichi*.) *In Soc. entom., Livre du Centenaire*, 1932, 523-545.—A general discussion of experiments and observations on the web of *Argiope*, which has no stabilized pattern but depends upon external influences causing momentary modification of the physiological state. The construction of the web is the result of mechanical action by the spider, and does not correspond to any geometrical necessity. The web serves as a trap, but the *Epeirae* can capture prey with their feet, outside the web. Since they react to vibrations transmitted through the air or a solid substratum, they could live as well on any substratum as on a web.—(Courtesy *Année psychol.*)

3061. Rose, M. Notes physiologiques sur le statocyste des Siphonophores. (Physiological notes on the statocyst of Siphonophorae.) *Asso. fr. av. sci.*, 1931, 258-259.—Many Siphonophorae possess a pocket, with an oily globule, near the natatory bladder. Since he finds that the interior globule is a very acid product, varying according to the nature of the food ingested, the author believes that this

organ is not only a statocyst, as is admitted, but a digestive gland, homologous to a rudimentary stomach.—(Courtesy *Année psychol.*)

3062. Roule, L. *Fishes: their journeys and migrations.* New York: Norton, 1933. Pp. 282. \$3.75.—R. R. Willoughby (Clark).

3063. Sälzle, K. *Untersuchungen an Libellenlarven über das Sehen bewegter Objekte.* (Studies on the seeing of moving objects in dragon-fly larvae.) *Zsch. f. vergl. Physiol.*, 1932, 18, 347-368.—The dragon-fly larva readily snaps out its hook-equipped labium in response to a moving object. In this experiment the speed of object movement was studied in its relation to intensity of object illumination, a second variable. The larva was placed in a small cage close to a disk of black cardboard, and during the rotation of this disk light reached the animal intermittently through a small circular aperture near its periphery. This "object" aroused the snapping response only if the speed of rotation was above .95-2.8 revolutions per second, and at this lower threshold a minimal light intensity of .043-.26 meter-candles was necessary; while at the upper threshold of rotation, 51.9-56.8 rev./sec., an intensity of .536-.626 m. c. was needed to bring the response. Between these limits a sigmoid relationship was found for rotation speed as a function of logarithm of light intensity. Individual differences among the subjects were negligible. In a second experiment, compensatory movements were forced by the rotation of a vertically striped wall which surrounded the caged larva, but the movements appeared only under conditions which permitted the maintenance of a constant relationship between a given speed of rotation and the width of the black and white stripes. The effective illuminated phase of each rotation was slightly different in the two experiments, a fact which can be theoretically accounted for; but when the dark phase between two successive light effects approached a minimum which was found to be identical (within four figures—.0165 sec.) for the two experiments, the animal ceased to react. This important fact indicates the special significance of this value as a clue to the photochemical processes produced by this intermittent stimulation. Incidentally, the ability of this insect to respond to some 60 light-dark changes per second greatly exceeds that of other insects, and approaches that of man.—T. C. Schneirla (New York University).

3064. Santschi, F. *Deux cas de parasitisme social chez les fourmis.* (Two cases of social parasitism among ants.) *La Nature*, 1932, No. 2881, 457-461.—The parasite ant penetrates into the nest of the host species, kills the queen, or provokes matricide by its own workers. Admitted as replacing the dead queen, she begins to lay eggs, and her offspring are cared for by the amphitryon workers. The new observations presented by the author deal with two new species of ants, discovered and studied in the Argentine by Carlos Bruch: *Bruchomyrma acutidens*, which infest the nests of *Pheidole nitidula strobili*; and

Labachena daguerrei, which invades the ant-hills of *Solenopsis saevissima*.—(Courtesy *Année psychol.*)

3065. Stavsky, W. H. *The geotropic conduct of young kittens. II.* *J. Gen. Psychol.*, 1933, 9, 452-455.—Kittens progressing upward upon an inclined plane orient at an angle θ which is a function of the slope of the plane. Equations describing this behavior show that θ is very nearly proportional to $\log \sin \alpha$. $\cos \theta$ plotted against $\sin \alpha$ gives a rectilinear relationship. The variability of θ decreases as the slope of the plane is increased. The minimal usable threshold slope increases as a function of the age of the animal.—H. Cason (Wisconsin).

3066. Stier, T. J. B. *Diurnal changes in activities and geotropism in Thyone briareus.* *Biol. Bull.*, 1933, 64, 326-332.—(*Biol. Abst.* VIII: 5829).

3067. Stolte, H. A. *Untersuchungen über Bau und Funktion der Sinnesorgane der Polychätengattung Glycera Sav.* (Research on the structure and function of the sense organs in the polychete genus *Glycera* Sav.) *Zsch. f. wiss. Zool.*, 1932, 140, 421-538.—About the prostomium of *Glycera*, the cells with free endings seem to be mechanical receptors, while on the prostomium primary cells must receive chemical stimulation. The paired nuchal organs respond to food, and the tube has primary cells for chemical reception. The parapodia furnish mechanical and chemical reception. The pygidium has, besides a mechanical sensitivity, a sensitivity to light, with rudimentary eyes located elsewhere, at the level of the head in certain species. The study of chemical sensitivity to acids, sugars, and sulphate of quinine enabled the author to determine the liminal values, weaker at the level of the prostomium than on the parapodia.—(Courtesy *Année psychol.*)

3068. Studnitz, G. v. *Beiträge zur Adaptation der Teleosteer.* (Studien zur vergleichenden Physiologie der Iris. II.) (Contributions to the adaptation of Teleostei. Studies of the comparative physiology of the iris. II.) *Zsch. f. vergl. Physiol.*, 1932, 18, 307-338.—The normal or excised eel iris requires 5-10 minutes for adaptation, the time varying with intensity of the light. Contraction with increased intensity of light is somewhat stronger in the isolated eel iris than in the frog iris. In the eel the pupillary reaction appears traceable to direct irritability of the iris musculature. There is no evidence for a functional relationship between retinal phenomena and the pupillary reflex. Pigment expansion shows a discontinuous onset, but retraction is continuous; and the same is true of corresponding cone changes in the goldfish retina. Injection of phosphoric acid brought the changes that characterize brightness adaptation of the retina, while KOH injection produced artificial darkness adaptation.—T. C. Schneirla (New York University).

3069. Thomas, M. *Les migrations des oiseaux et le problème de l'instinct.* (The migrations of birds and the problem of instinct.) *Rev. fr. ornithol.*, 1932, 159-172.—A discussion with Cathelin on the subject of the interpretation of migrations given by the latter, founded principally on the attraction of air

currents, and particularly the philosophical attitude taken by each. Aside from the accusations of anthropomorphism made by Cathelin, and the contrary accusations made by Thomas, the author maintains that migrations are essentially determined by the need of food; the early departure does not indicate the capacity of instinct to predict the future.—(Courtesy *Année psychol.*)

3070. Thorner, H. *Die harmonische Anpassungsfähigkeit des verkürzten Nervensystems, untersucht an Schlangen.* (The adaptive activity of the subdivided nervous system studied in snakes.) *Pflüg. Arch. f. d. ges. Physiol.*, 1932, 230, 1-15.—In a spinal preparation of *Tropidonotus natrix* L. a reflex may be elicited by pinching the tip of the tail with forceps. The response is a wave-like motion of the body. With progressive sectioning of the spinal cord the wave-length decreases. Shortening can also be observed by fixing the snake mechanically and moving the point of fixation gradually tailwards. The effect may also be observed in isolated fore- and middle-sections of the snake. A part of the snake thus behaves like a whole snake of smaller size, rather than like a part. This indicates a relation between the coordination of the muscle segments and the whole field of stimulation which is not accounted for by the assumption of preformed anatomical or physiological connections.—B. F. Skinner (Harvard).

3071. Tucolesco, J. *La dynamique de la larve de Tenebrio molitor et la théorie des tropismes.* (The dynamics of the larva of *Tenebrio molitor* and the theory of tropisms.) *Bull. biol.*, 1933, 67, 480-514.—The author asserts that Loeb's theory rests on two premises which are not confirmed by experience: the uselessness of the nervous system in the lower animals and the fact that orientation is the primary phenomenon in tropism. From his own observations, the author affirms that orientation is a secondary phenomenon which is superadded to the primary photochemical reaction. Moreover, there is present an activity of the central nervous system which originates from the stimulations produced in the nerve cell through physico-chemical modifications caused by the action of exterior forces.—Math. H. Piéron (Sorbonne).

3072. Verrier, M. L. *Sur les rapports entre la structure des yeux et le comportement.* (On the relations between eye structure and behavior.) *Arch. de zool. exper.*, 1932, 74, 305-316.—A study of the eyes of the lizard *Trogonophis wiegmanni*, of *Scincus officinalis*, of the chameleon, of the agama, and of the gecko, as well as the behavior of these reptiles. The eyes are well organized. The chameleons and the agamæ have a fovea, and visual acuity seems great in all of them. However, the behavior is dominated by tactile stimulation, thermal and moisture for *Trogonophis*, thermal for the gecko and agama, while the chameleon has a largely visual behavior. The author concludes that reaction modalities cannot be deduced from the presence of an organ, nor even from the degree of perfection of the structure of that organ.—(Courtesy *Année psychol.*)

3073. Verrier, M. L. *Recherches sur la vision des reptiles. Etude comparée de la morphologie des cellules visuelles et du pouvoir séparateur de la rétine.* (Studies on vision in reptiles. A comparative study of the morphology of the visual cells and the separating power of the retina.) *Bull. biol.*, 1933, 57, 350-369.—The author studied two crocodiles and ten saurians. In the crocodiles he found cones and rods, the latter being of great size and predominance. In the blind-worm (*Anguis fragilis*) he found two kinds of cones: the first were bulky and thick-set, while the others were thin and elongated. In the ophidians the cones varied according to the species. In the adders the cones were all similar, i.e., bulky and thick-set. Both kinds were found in the vipers.—Math. H. Piéron (Sorbonne).

3074. Verrier, M. L. *Recherches sur le champ visuel des vertébrés. Délimitation du champ de vision de Scorpoena scrofa L.* (Studies on the visual field of vertebrates. Delimitation of the visual field in *Scorpoena scrofa* L.) *C. r. Acad. sci.*, 1933, 197, 1346-1348.—In this animal, often called a wall-eyed fish, in which the sclerotic coat, the choroid, and the pigmented retinal epithelium are very thin, it is possible to use trans-scleral images. The author found the visual field, obtained with 36 measures (18 meridians, on each side), to be never lower than 70° and generally between 80° and 90°, reaching 100° at the horizontal meridian on the temporal side. The right eye and the left were sensorily symmetrical. It was found from data on the eyes of other teleosts that the visual field must be analogous in all the species. The visual fields differ very little in birds, mammals, and in man. The author points out that eyes which cannot be compared from the point of view of acuity are nevertheless able to explore regions in space which are sensorily equal.—Math. H. Piéron (Sorbonne).

3075. Viaud, G. *Sur le phototropisme des daphnies. Lois du mouvement tropistique positif.* (On tropism in the daphnids. Laws of positive tropic movement.) *C. r. Acad. sci.*, 1933, 197, 1763-1765.—By means of instantaneous photographing of a colony of daphnids having a positive phototropism and living in a homogeneous light field, the author determined the displacements of the center of gravity of this colony from its original location. The results gave a parabolic curve: at the beginning the intervals traversed were proportional to the squares of the times; then the speed became uniform (linear function); and finally the speed was annulled (at the moment of contact with the side of the glass container) and there took place a negative displacement of the weakened oscillations around a median point preceding equilibrium. The author gives the above a mechanistic interpretation, comparing the numerical mass of daphnids to a mechanical mass immersed in a fluid and stimulated by a constant force.—Math. H. Piéron (Sorbonne).

3076. Wagner, H. *Über den Farbensinn der Eidechsen.* (On the color sense of the lizard.) *Zsch. f. vergl. Physiol.*, 1932, 18, 378-392.—The subjects were individuals of two *Lacerta* species. The method

involved the coincident presentation of two or more forks, on each of which a piece of mealworm was mounted in front of a small disk of pigmented or gray paper (Ostwald series). The food before one of the disks was treated with a repelling substance, usually common salt. It was found possible to train the animals to *inhibit* their snapping (training to a "warning stimulus"), but not to train them to snap *more readily* at certain stimuli (training to food stimuli). In a free response experiment, the lizards snapped more readily at greens and grays than they did at the remaining colors. After a subject had learned to avoid snapping at a color, different values of gray were paired successively with this "warning color," but discrimination continued. In this manner, animals distinguished as warning colors red No. 6 of the Ostwald series, as against green No. 21, in 150 trials; yellow No. 2 against green No. 23 in 360 trials; blue No. 14 against violet No. 10 in 130 trials. Although there appears to have been some slight confusion of the yellow No. 2 with part of the gray range, the experimenter concludes that in all cases the discriminations were based upon a differential sensitivity to wave-length. In further experiments designed to examine the distinctiveness of spectral stimuli, each trial involved the presentation to the animal of a warning color that was accompanied by two adjacent spectral values. Prospecting the spectrum, evidence was found for at least eight distinctively stimulating zones. In the yellow and green, values were not distinguished as readily from those of adjacent zones as was the case when red and blue were used as warning colors.—T. C. Schneirla (New York University).

3077. Wald, G., & Hecht, S. The intensity discrimination and visual acuity of the fruit fly, *Drosophila melanogaster*. XIV Cong. int. di fisiol., Sunti, 1932, 262-263.—Using the method of reaction to striated movement in the visual field, it is found that the visual acuity of the fruit fly increases with illumination following an S curve, in logarithmic relation to the light (with an absolute threshold of about .01 millilambert), to the maximal value of .0016, corresponding to an angle of 10°. If the variation in acuity with light can correspond to the number of ommatidia in the compound eye of the fly, it is apparent that discrimination of intensity cannot have the same explanation, and the authors resort to variations of frequency of impulse in the optic nerve.—(Courtesy *Année psychol.*)

3078. Wohlfahrt, T. A. Anatomische Untersuchungen über das Labyrinth der Elritze (*Phoxinus laevis* L.). (Anatomical studies on the labyrinth of the minnow *Phoxinus laevis* L.) *Zsch. f. vergl. Physiol.*, 1932, 17, 659-685.—A study of the general and nervous anatomy of the semicircular apparatus, from the standpoint of auditory sensitivity. The so-called protoplasmic epithelium is extensively developed in the labyrinth of this form. The thick and the fine fibers of the auditory nerve form a more or less anastomosing plexus beneath the sense cells, and the two types of fiber end differently in the

cristae. The horizontal plexus is more weakly extended under the sensory epithelium of the utriculus, and in the cotillus of the utriculus the sensory epithelium is differently constructed from that elsewhere. There is no mechanism in the *Phoxinus* labyrinth analogous to the basilar membrane; the marginal fiber system is too irregularly developed for such a role.—T. C. Schneirla (New York University).

3079. Wood, F. D., & Wood, H. E. Autotomy in decapod Crustacea. *J. Exper. Zool.*, 1932, 62, 1-55.—The authors have investigated the autotomic process in a number of species of Crustacea (finding it in all the Brachyura, the majority of the Anomura and some Macrura), defining the reflex mechanism of autotomy properly called, as distinct from the autospasia of Piéron, as a tearing off by means of localized fragility rather than an active mechanism, and what they call self-stripping (removing the member by biting, already described by Piéron and Rabaud under the name of "autopsalizing").—(Courtesy *Année psychol.*)

3080. Wünn, F. Ueber die Cupula terminalis im Labyrinth des Hechtes. (On the terminal cupule in the labyrinth of the pike.) *Zsch. f. Laryngol.*, 1932, 22, 481-497.—Using Steinhausen's method for making the living cupule visible in the ampullae of the semicircular canals of the pike, the author has taken many stereoscopic photographs and confirms the essential data of Steinhausen's work, showing the size and complexity of this formation, which is no longer recognizable after the use of fixatives.—(Courtesy *Année psychol.*)

[See also abstracts 2850, 2960, 2967, 2973, 2979, 2980, 2992, 3004.]

EVOLUTION AND HEREDITY

3081. Laughlin, H. H. Racing capacity in the thoroughbred horse. Part I. *Scient. Mo.*, 1934, 38, 210-222.—In order to determine the mathematical laws governing the inheritance of racing capacity, it is first essential to find a mathematical index for the latter. This is provided in the quality-of-performance formula, which takes account of the factors of distance-run, weight-carried, time, age, and sex, in a horse's different races, and from which can be derived his biological handicap.—J. F. Dashiell (North Carolina).

3082. Mason, S. H. A survey of facts and theories about twins. *Smith Coll. Stud. Social Work*, 1934, 4, 175-196.—A semi-popular survey of the literature with reference to the following topics: the two genetic types of twins, the physiology of twinning, the mechanism of twinning, frequency of the occurrence of twins, factors associated with twinning, resemblances and differences between twins, and, finally, twins and the question of heredity vs. environment.—R. H. Brown (Clark).

3083. Mason, S. H. A comparative study of four pairs of twins examined in kindergarten and in junior high school, with special reference to personality. *Smith Coll. Stud. Social Work*, 1934, 4,

197-286.—The findings from four pairs of twins tested in 1925 and again in 1932 are discussed for each pair under the headings: general information and social setting, type of twins, physical findings, psychometric ratings, and personality and behavior reactions reported by parents and observed by the writer, "In general, in neither physical, mental, or personality traits were these twins 'identical.' The monozygotic pair III differed markedly in physical appearance and in intelligence. The dizygotic pair IV was much alike in physical and intellectual measurements. Only Twins II were strikingly alike in personality. It would seem best, then—as others have pointed out—to discard the term that implies duplicate or identical characteristics."—R. H. Brown (Clark).

3084. Tozzer, A. M. *Biography and biology.* *Amer. Anthropol.*, 1933, 35, 418-432.—In most biographies, ancient as well as modern, the author tries to find something in the subject's parentage by which to explain his characteristics and aptitudes. A few writers invoke environment or chance as explanatory factors, but the majority offer what amounts to propaganda on the side of heredity. The writer of this paper presents and criticizes many examples of this effort to invoke heredity as an explanatory factor. He notes the frequent difficulty of finding eugenically qualifying ancestors, the employment of "ambitiously fabricated" genealogies which are mere fictions, the arbitrary emphasis on ancestors who prove the desirable point, the identification of qualifications due to social status with factors in the germ plasm, and the assumptions of an obsolete or speculative racial psychology, as sources of error. Even religion and occupation have their potential chromosomes, according to the wilder speculations. Supposedly scientific biographical studies are subject to the same criticism. The speculations about Jonathan Edwards form a kind of *reductio ad absurdum* of the method. There is no special gene for any capability, and biographers are urged to make a more careful scrutiny of scientific facts.—C. M. Diserens (Cincinnati).

3085. Wieland, M. *Untersuchungen über Farbenschwäche bei Konduktorinnen.* (Investigation of color-weakness in female transmitters.) *Graefes Arch. f. Ophth.*, 1933, 130, 441-462.—71 mothers of sons with natively defective color vision were made the experimental subjects, because such women are known to be transmitters. Three of these were clearly defective. The problem was to measure rigorously the color vision of the remainder in order to disclose color weakness if present. The specific thresholds for red and green, as measured in terms of minimum perceptible purity, ran higher than for normals. The Rayleigh equation, as determined with the anomaloscope, was shifted toward the green for all transmitters. The results indicate that frequently the dominance of normal color sense in transmitters is not absolute. A bibliography of over 50 titles is appended.—S. M. Newhall (Yale).

3086. Wiethold, F. *Ueber das Gesetz zur Verhütung erbkranken Nachwuchses.* (The law on the prevention of hereditarily abnormal offspring.)

Krim. Monatsh., 1934, 8, 27-32.—Wiethold expounds the sterilization law of 1933, answers objections to it, and stresses the necessity of race culture. The conditions for which sterilization is permissible are schizophrenia and manic-depressive psychosis, both of which are regarded as hereditary beyond question; mental defect, 80% of which is considered inheritable; hereditary chorea; hereditary blindness and deafness; severe inheritable physical deformities; and marked chronic alcoholism. The latter is included because it occurs almost exclusively on the basis of hereditary mental inferiority. The whole procedure is secret and the operation may be carried out forcibly against the individual's will. The law applies only to obviously affected persons, not to the healthy carriers of abnormal Anlagen. A separate regulation provides for the sterilization of dangerous habitual criminals.—M. E. Morse (Catonsville, Md.)

[See also abstracts 3033, 3129.]

SPECIAL MENTAL CONDITIONS

3087. Bonaparte, M. *Der Mensch und sein Zahnarzt.* (Man and his dentist.) *Imago*, 1933, 19, 468-472.—The natural reaction to the person who has extracted a tooth, as seen in outlying districts to this day, is negative to a degree that makes him psychologically equivalent to a castrator. The positive reaction toward the modern dentist, who enjoys great popularity among his patients, rests on the fact that he now rarely extracts a tooth. On the contrary, he fills gaps, and, so to speak, undoes castration, thus performing the function of restorer of the phallus, the role which nature so graciously plays in childhood. This accounts for the strong emotional attitudes, almost always involved, of hatred toward a dentist who seems not to have done his work well, and of confidence, affection, and even love, toward his successor who has inspired hope for the restoration of the phallus.—M. J. Powers (New York).

3088. Bornstein, S. *Das Märchen vom Dornröschen in psychoanalytischer Darstellung.* (The story of Sleeping Beauty in psychoanalytic interpretation.) *Imago*, 1933, 19, 505-517.—If we assume that the story is a projection of the puberty problems of an actual child whom we are to analyze, its details would be symbols interpreted perhaps, as follows: The child's name, Dornröschen, suggests the touch-me-not stage of puberty, while the thorn hedge represents the hostility toward men and sex and the fear of penetration and of the unknown. The 12 god-mothers, and the 13th wicked one, represent the mother in her double role of parent and rival and, with the father who loves his daughter above everything, present a complete picture of the girl's Oedipus complex. Also, the parents have no children, i.e., the father loved the mother once only, for the sake of the child. The child flees from the reality of even that one coitus and has a frog (a penis symbol not the father) go to the mother to announce that she shall give birth to a daughter. She abandons her childish virtue, yielding to adolescent sex curiosity,

and the bleeding (menstruation, defloration, castration) is the mother's punishment for masturbation and sex curiosity. Psychoanalytic interpretation is applied to the other details of the story.—*M. J. Powers* (New York).

3089. Botti, L. *Considerazioni psicologiche sulla morte.* (Psychological considerations on death.) *Scritti onore Kiesow*, 1933, 29-31.—*R. Calabresi* (Rome).

3090. Brüel, O. *Den laegevidenskabelige psykoanalyses indikationer.* (Indications for the medical application of psychoanalysis.) *Ugeskr. f. laeger*, 1934, 10, 271-273.—The writer enumerates and discusses the various ailments which from the point of view of the medical sciences may benefit from or eventually be cured by psychoanalytic treatment.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

3091. De Groot, J. L. *Problems of femininity.* *Psychoanal. Quar.*, 1933, 2, 489-518.—Bisexuality results in an imperfect dichotomy of masculinity-activity and femininity-passivity. All libido is originally narcissistic, and it becomes depleted as object cathexis is achieved by activity. Excessive depletion of primary narcissism compels passivity. Infantile sexuality is doomed to frustration, which leads to a withdrawal of libido into the ego for object cathexis—activity—or to passivity, thereby securing love. Aggressive tendencies in the male are expressed in sadism toward love object or work. In the female they are expressed by inversion in the pleasure of pain in defloration and childbirth and in attitudes in other spheres. Penis envy in girls exceeds birth envy in boys because of its more concrete basis, and the female suffering this narcissistic wound is compelled to assume a passive role. The following theoretical questions are then elaborated: Why is a high degree of narcissistic cathexis needed? Why is aggression turned inward to restore injured narcissism? What is the relationship of actively and passively directed libido strivings to more common active and passive reactions outside sexuality? What does the psychoanalytic theory contribute toward the explanation of the biological fact that male sexual life is accomplished with the help of actively directed libido strivings while woman utilizes libido strivings with a passive role?—*M. H. Erickson* (Worcester State Hospital).

3092. Deutsch, H. *Über die Weiblichkeit.* (Concerning femininity.) *Imago*, 1933, 19, 518-528.—Despite Freud's questioning the identification masculine-active and feminine-passive, positive arguments speak for it. The anatomically conditioned development from pregenital aggression to activity of the sex organ meets an obstacle in the want of that organ in girls, in whom masochism then takes the place of aggression and passivity that of activity. Since the motives for hatred of the mother, such as the weaning of the child or the bearing of other children, are not commonly strong enough to alienate a boy, we look farther and find the castration complex peculiar to girls—the mother blamed for the lack of the penis.

The corresponding transfer of attachment to the father is less satisfactorily explained by the hope of later acquiring one from the father through the sex act. It is rather that the want of the organ forces girls into masochism and passivity toward the father too. The desire to have a child by the father is second to the original desire to have a child in identification with the mother in her active role toward the child or as a substitute for the penis. The fear of castration leads boys to abandon the Oedipus complex and form the ego. In girls the castration complex leads to the Oedipus complex, which may last indefinitely.—*M. J. Powers* (New York).

3093. Eder, M. D. *Die jüdischen Gebetsriemen und andere rituelle Gebräuche der Juden.* (The Jewish phylacteries and other ritual customs of the Jews.) *Imago*, 1933, 19, 473-504.—Psychoanalytic study is made of the significance of the phylacteries (tefillin), fringes (tsitsith), prayer shawl (talith), and door-post amulet (mesusah). Pre-psychoanalytic studies by Wallis Budge, W. Robertson Smith, J. B. Hannay, and others revealed the presence of magical, totemistic and sexual elements in these ritual objects. Psychoanalysis regards them as closely connected with the parental imagos, castration fear, and the full content of the Oedipus situation. The phylacteries, etc., are identified by patients with the "cruel" father or mother; they are projections of the introjected "evil" father and mother imagos, and the individual placates his own aggressive impulses by acts of atonement. The motives of the sadistic fantasies regarding these objects evinced by neurotic patients have roots in extreme antiquity, in totem murder. (Abraham demonstrated how the woolen prayer shawl is a substitute for the ram's skin.) The introjected parent (the sacrificial animal in the history of the Jews, and the actual father in the case of the individual) is a source of unpleasure and is ejected and projected in the form of phylacteries, talith and mesusah. This process, however, is active only so long as the nature of the ritual objects is consciously or unconsciously perceived by the worshipper. Otherwise they lose their magical potency, and the super-ego has only the neurotic path available for its discharge, i.e., neurotic sense of guilt, craving for punishment, etc.—*J. W. Gassner* (New York).

3094. Fenichel, O. *Outline of clinical psychoanalysis.* *Psychoanal. Quar.*, 1933, 2, 562-591.—Chapter 7. Neuroses related to perversion: Hyposexuality is a displacement of libido with sexuality inhibited because of unconscious infantile meaning. Hypersexuality is a failure due to infantile fixations to achieve sexual gratification, with consequent excessive activity. Analytic significances of Don Juan complexes, ejaculatio praecox, and priapism are discussed. Non-endocrine nymphomania signifies insufficient orgasmic ability with strong sadistic trends springing from penis envy. Compulsive masturbation is the clearest example of hypersexuality as a tendency to express all tensions by way of the genital. Impulsive behavior and addiction are next discussed.

Impulsions are found to be expressive of unconscious conflict between unconscious instinctual demands and their defenses. Gambling, kleptomania, incendiarism, wandering, and drug addiction are next discussed. The latter is found characterized by oral fixation and a preference for the pharmacotoxic rather than a sexual orgasm.—*M. H. Erickson* (Worcester State Hospital).

3095. **Ferenczi, S. Thalassa; theory of genitality.** *Psychoanal. Quar.*, 1933, 2, 361-403.—Introduction and five chapters. Chapter I deals with amphimixis of erotism in the ejaculatory act, discussing unconscious equations between sexual and excretory functions with division into anal and urethral types. The next chapter discusses coitus as an amphimictic phenomenon in which there is an identification with the penis and with the semen which allows in reality a return to the uterus, thus placing the Oedipus complex on a biological basis. Stages in erotic sense of reality are next elaborated—oral erotism, cannibalism, and masturbation—with maturity urethral in type in the male and anal in the female. Interpretations of individual phenomena in the sex act—erection, friction, secondary sex character manifestations, and emotions—are discussed. Chapter V discusses the genital functioning of the individual as more than mere release of libidinal tension. The act appears to be a symbolic return to the womb, showing the prenatal pleasure state and the symptomatology of both birth anxiety and the overcoming of it in a successful birth, thus concentrating a whole series of elements of pleasure and anxiety in the act.—*M. H. Erickson* (Worcester State Hospital).

3096. **Fetzer, M. E. A study of the autonomic nervous system in conjunction with psychoanalysis.** *J. Abn. & Soc. Psychol.*, 1933, 28, 276-279.—Repressed fears and conflicts alter the physiology of the autonomic nervous system. This conditioned physiological state can be altered by the process of psychoanalysis.—*C. H. Johnson* (Boston Psychopathic Hospital).

3097. **Freud, S. Délires et rêves. La "Gradiva" de Jensen.** (Delusion and dream. Jensen's *Gradiva*.) Paris: Gallimard, 1933. 15 fr.—*Math. H. Piéron* (Sorbonne).

3098. **Hitschmann, E., & Bergler, E. Die Geschlechtskälte der Frau. Ihr Wesen und ihre Behandlung.** (Frigidity in woman; its nature and treatment.) Vienna: Ars Medici, 1934. Pp. 87. RM. 3.00.—*R. R. Willoughby* (Clark).

3099. **Jones, E. Psycho-analysis and folk lore.** *Scientia*, 1934, 55, 209-220.—Though almost entirely unrecognized by folk-lorists, many extensive and original contributions have been brought to the science of folk-lore by psychoanalysts during the past twenty years, despite the fact that academic psychology itself has been singularly unhelpful to such ancillary sciences as folk-lore. Psychoanalysis shows the manner in which many savage customs and beliefs may be allied to the mental mechanisms characteristic of unconscious products; and what is perhaps even more important, they reveal the same

underlying content and are derived from the same sources. There is a far-reaching parallelism between survivals of primitive life from the racial past and survivals from the individual past. Symbolism, disregard of reality, tabus, and other such topics are discussed in detail, the discussions eventually leading to a close association between the content of the unconscious as shown by psychoanalysis and the primitive customs and beliefs in which folk-lore has its genesis.—*L. S. Selling* (Institute for Juvenile Research).

3100. **Kelly, E. L. Individual differences in the effects of mescal.** *J. Gen. Psychol.*, 1933, 9, 462-472.—Five persons took doses of mescal (peyote) and each person kept a record of his experiences. The author describes individual differences in imagery, physiological disturbance, and duration of the effects. There were also some striking similarities in certain aspects of imagery.—*H. Cason* (Wisconsin).

3101. **Marinesco, G. Visions colorées provoquées par la mescaline.** (Visions in color aroused by mescaline.) *Presse méd.*, 1933, No. 92, 1864-1866.—The author summarizes the observations of two artists who reproduced in color their images caused by mescaline and aroused by various noises, sounds, and musical instruments. First of all must be taken into consideration the individual and constitutional factor, which is the expression of the conditioned reflexes learned through experience by the individual artist, who thus furnishes the brilliancy of style and richness of the fantasies produced by the drug. The hallucinations were generally agreeable and approached the marvelous. The artists found that their affectivity and emotivity were exaggerated during the period of intoxication, but never to the point that they believed in the reality of their hallucinations. Nevertheless, at times their critical faculty and power of discrimination were lowered.—*Math. H. Piéron* (Sorbonne).

3102. **Rado, S. Fear of castration in women.** *Psychoanal. Quar.*, 1933, 2, 425-475.—Castration fear in women, the illusory penis fantasy, the overcoming of penis envy by converting the body surface into a narcissistic substitute or by masculinization of the intellect, are discussed. Masochistic deformation of the genital impulse resulting from castration fear is summarized in the formula: "Anatomical experience→extinction of the amorphous genital phase of the ego→domination of the ego by genital masochism→narcissistic defense reaction of the ego: phallic complementation→fear of castration in the ego, as a signal of danger from genital masochism." Modifications of castration fear are presented next. In the morphogenesis of neuroses three types of defensive measures are available to the ego. These are (1) flight, which includes homosexuality, frigidity, and phobia development as an expression of genital masochism; (2) combat, which includes marrying a weakling, kleptomania, masochism, and compulsions; and (3) choice of lesser evil, which includes self-defloration, "throwing self away," extra-genital injuries such as operations, martyr roles, and genital

masochism as an overt perversion.—*M. H. Erickson* (Worcester State Hospital).

3103. *Rovasio, A. L'io dei morenti.* (The ego in the dying.) *Rass. stud. psichiat.*, 1933, 22, 87-106.—The author studied the mental state of the dying, and demonstrates the predominance of emotions in the current of thought, the tendency toward automatism, an excessive and unilateral evolution of memories, the disaggregation of mental systems possessing a fixed characteristic (convictions, for example), and certain phenomena of an oniric nature. He emphasizes the importance of the emotion of fear in these manifestations.—*R. Calabresi* (Rome).

3104. *Spitz, R. A. Ein Beitrag zum Problem der Wandlung der Neurosenform. Die infantile Frau und ihre Gegenspieler.* (A contribution to the problem of the change in form of the neuroses. The infantile woman and her counterparts.) *Imago*, 1933, 19, 454-467.—In contrast to the large, well-developed, voluptuous woman of 19th-century literature, art, theater, and fashion, the modern movie star as the wish creation of the masses presents an embodiment of the 20th-century ideal of womanhood: small, slender, boyish, short-haired. The explanation that the appeal of this type to man's aggressiveness and protection accounts for its popularity is untenable when we discover that this type is only a disguise for a very energetic, self-possessed, headstrong nature. The little-girl mate is the opposite of the mother and so can neither suggest nor repeat the Oedipus situation in married life. Another factor is that this choice of mate represents a hidden homosexuality in that this type subordinates the secondary characteristics.—*M. J. Powers* (New York).

3105. *Winsor, A. L. A study of the development of tolerance for drugs.* *Psychol. Bull.*, 1933, 30, 662.—Abstract.—*J. F. Dashiell* (North Carolina).

[See also abstracts 2936, 3059, 3144, 3339.]

NERVOUS AND MENTAL DISORDERS

3106. *Abély, X., & Abély, P. L'internement des arriérés sociaux (pervers constitutionnels).* (The internment of the socially retarded or constitutionally perverse.) *Ann. méd.-psychol.*, 1934, 92, 157-183.—Some delinquents are normal individuals with bad environment or defective education. Other delinquents are pathological; they are constitutionally wrong-doers, often called psychopathic personalities. They are distinguished from normal delinquents by their precocity, lack of effect of education, and impossibility of checking their antisocial activity. They behave as badly in prison as outside. In Belgium, special buildings connected with the prisons are provided for such cases. They are given indefinite sentences. The authors think it advisable for such buildings to be connected with mental hospitals rather than prisons in France. They point out that such provisions are permissible under existing laws and not financially impossible. The constitutionally perverse are not desirable in regular mental hospitals, and so have usually been sent temporarily to prisons.

After serving their terms, they are soon a menace to society and back in court again. They should be cared for under the department of public health rather than the department of justice or education.—*M. B. Mitchell* (New Hampshire State Hospital).

3107. *Abély, X., Abély, P., & Nodet, —. Un cas de perversion constitutionnelle.* (A case of constitutional perversion.) *Ann. méd.-psychol.*, 1934, 92, 216-223.—A case is presented of a young girl who was repeatedly being sent to prison or a mental hospital. Although of normal intelligence, she was so delinquent that the psychiatrists did not wish to keep her and she was repeatedly sent to court. After an attack of encephalitis she became definitely psychotic, but her behavior improved. She became such a good patient that she was not transferred to the new department for criminally insane or perverse women when it was opened.—*M. B. Mitchell* (New Hampshire State Hospital).

3108. *Bragman, L. J. The doctor's attitude toward sex.* *Med. Rec.*, 1934, 139, 267-270.—The subject of sex in its psychological and social bearings is so central and of such importance that the medical man cannot fail to have it brought before him. He cannot, like his predecessors, ignore its existence or feel that its recognition would be impertinent or indecorous. Yet medical education in this regard displays a vacuum that is lamentable, and psychiatry is almost equally remiss. To the physician, nothing human should be foreign, and regarding sex, scientific interest is a fundamental and practical necessity. Psychosexual anomalies are not rare. They call for as thorough an investigation, understanding and handling as does any other disturbance. Something should be known of the significance and genesis of masturbation, particularly. It is generally believed that for every neurosis there must be some abnormal form of sex expression, many of which must be psychic or esthetic. Each of these requires scientific study and treatment, in which regard the researches of Freud will be found invaluable. Psychiatrically, the sexual factors cannot be avoided. Psychoses and psychoneuroses based upon homosexual panic or parental fixations are constantly being encountered. Sex should have its place in the curriculum of the medical student.—*L. S. Selling* (Institute for Juvenile Research).

3109. *Colis, A. Etude des formes psychosiques de la paralysie générale.* (A study of the psychotic forms of general paralysis.) Lyon: Bosc & Rion, 1932. Pp. 112.—Psychotic forms are rare in cases of general paralysis. They are most frequently found after malaria therapy, and are characterized especially by auditory hallucinations. These manifestations are characteristic of an attenuated form of meningo-encephalitis. Bibliography.—*Math. H. Piéron* (Sorbonne).

3110. *De Sanctis, S. "Situazioni" psichiche non discorsive e fobie latenti.* (Ineffable psychic situations and latent phobias.) *Scritti onore Kiesow*, 1933, 32-41.—The author's consideration of cases of psychasthenia, in which are observed psychic situa-

tions inexpressible in words and a state of latent phobia, leads to the conclusion that the psychology of psychasthenic personality must be explained by a lack of suppleness, by a narrowing in the un verbalized regions of the mind, which temporarily blocks the use of non-differentiated energy in so far as one is conscious of it. This is the primary fact from which follows all characterological variation. The neurosis is a tumultuous release of energy in one or both of the principal outlets, intellectual or affective.—*R. Calabresi* (Rome).

3111. Dupouy, R., Courtois, A., & Beley, A. P. L. Syndrome d'imitation du nourrisson (trophimomimie) d'allure hystérique chez une démente précoce en évolution. (Contribution à l'étude des manifestations hystériques dans la démence précoce.) (Syndrome of imitation of a suckling (trophimomimia), hysterical behavior in a beginning dementia praecox. Contribution to the study of hysterical manifestations in dementia praecox.) *Ann. méd.-psychol.*, 1934, 92, 237-239.—An 18-year-old girl began having spells in which she would cry like a baby, suck her thumb and take great pleasure in sucking nursing bottles. Her speech was inarticulate and she showed a general reversion to an infantile state. The patient was a moron and had suffered from encephalitis three years before these crises began. The authors diagnosed the case as dementia praecox with hysterical symptoms.—*M. B. Mitchell* (New Hampshire State Hospital).

3112. Faure, M. Influence des taches solaires sur les suicides, les crimes et les accidents. (The influence of sun spots on cases of suicide, crimes, and accidents.) *Gaz. des hôp.*, 1932, 104, No. 66.—In comparing the dates on which occur a chain of crimes, cases of suicide, and accidents with those on which sun spots have been at the meridian, Fauré concludes that the latter play a part in the determination of the above acts, which are often absurd and unforeseen. Cases of suicide, crimes, and accidents appear in series, as do sudden deaths and acute symptoms of chronic diseases. These series coincide with the series of sun spots. This two-fold coincidence appears to indicate that the passage of the spots over the meridian acts both on the nervous system concerned in social life (suicide, crimes, and accidents) and the nervous system concerned in nutrition (acute morbid symptoms and sudden death).—*Math. H. Piéron* (Sorbonne).

3113. Fuchs, J. Icterus e emotione. (Icterus from emotion.) Leipzig: Edelmann, 1932. Pp. 26.—*R. R. Willoughby* (Clark).

3114. Gardien, M. P., & Léculier, P. A propos d'un divorce prononcé pendant l'internement. (A divorce pronounced during internment.) *Ann. méd.-psychol.*, 1934, 92, 209-214.—After 24 years, a man was granted a divorce from his wife while she was in a mental hospital. He offered three reasons for divorce: (1) his wife and her parents had purposely kept him from knowing of her mental breakdowns before her marriage, (2) cruelty during her lucid intervals, and (3) her refusal to live with him for ten years when not hospitalized. The court decreed a

divorce on the last two grounds.—*M. B. Mitchell* (New Hampshire State Hospital).

3115. Gräff, P. Ueber schizophrene Spätzustände und ihre Beziehungen zu den Krankheitsverläufen. (The terminal conditions in schizophrenia and their relations to the course of the disease.) Cologne: Paffenholz, 1932. Pp. 34.—*R. R. Willoughby* (Clark).

3116. Helweg, H. Den mani depressive psykoses betydning for historiske personligheder. (The importance of the manic-depressive psychosis for historic personalities.) *Hospitaltid.*, 1934, 77, 1-21.—Among factors of importance to history is the kind of mental ailment present, to a more or less degree, in those personalities who make history. The author offers a survey of the bearing of three classes of mental illness: First, the kind which gradually destroys the individual, such as dementia praecox. As examples in this group are mentioned Nietzsche, the painters Josephson and Van Gogh, the poet Hölderlin, and King Christian VII of Denmark. The second group, the "psychopaths," whose ailment does not destroy but transforms the individual, seems to stretch from Michel Angelo to H. C. Anderson, from Baudelaire to Tolstoy. In the third group, the manic-depressive psychotics, the array of eminent personalities seems especially impressive. Here we find General Blücher, whose states of depression are said to have delayed the fall of Napoleon; Goethe, Søren Kierkegaard, Martin Luther, etc. Among the "suspects" are Mozart and Beethoven, Kaiser Wilhelm II, Bismarck, Grundtvig, Tegnér, and many others.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

3117. Heuyer, G. Un internement contesté. (A contested internment.) *Ann. méd.-psychol.*, 1934, 92, 184-208.—A paranoiac who believed he was a great inventor embezzled large amounts of money and threatened government officials. He served several short penal sentences, appeared in many court trials, and was interned twice in mental hospitals in 20 years. After release from his first internment he began his threats again, instead of leaving the country as he had agreed to do. After his second release, he started legal proceedings against the physicians for holding him unjustly.—*M. B. Mitchell* (New Hampshire State Hospital).

3118. Hoffman, H. F. Der Psychiater und die neue Zeit. (The psychiatrist and the new era.) *Zsch. f. psych. Hygiene*, 1933, 6, 161-167.—It is the duty as well as the right of the psychiatrist in the new socialistic state to consider the interests of the community before the interests of the individual. In scientific practice and research his aims must be to increase the individual's value to the community and to extirpate worthlessness. Even the progeny of the sick must be considered. Statistical researches show the percentages of diseases transmitted to offspring when one or both parents are afflicted. To these the law of 1934 applies: Sterilization is appropriate in such cases. However, care must be taken to make sure that the person to be sterilized really has a hereditary disease. Only psychiatrists with solid clinical backgrounds of study may determine which

are such cases, and they must be so skilled in hereditary-biological matters as to be able to make an exact survey of all the factors. The ideal of the sterilization law is to teach people to think along race-hygienic lines and to produce a healthy, strong and numerically powerful nation.—*L. S. Selling* (Institute for Juvenile Research).

3119. *Korbsch, H. Bericht über eine nervenärztliche Beratungsstelle.* (Report on a neuro-medical advice station.) *Zsch. f. psych. Hygiene*, 1934, 6, 181-192.—This is a detailed report of the activities of an advice station for persons afflicted with psychic and nervous maladies in a rural district during the administration of Korbsch, which was of two years' duration. Reports of patients were made by precinct caretakers to their district supervisors, who, if the cases were urgent, brought the patients to the station for examination, medication, and advice. Full reports were made by caretakers and supplemented by further reports from relatives. Examinations were held twice weekly. Under Korbsch 334 patients were cared for. Tables are given showing the prevalence of the diseases from which they suffered and the treatment in each case, and each type of illness is discussed briefly. Korbsch stresses the fact that the aim of the station is to give individual treatment, and that good results were obtained along that line. It is evident that a psychiatric-neurological scrutiny of the entire national body, carried on over a period of years or decades, is the only sure way to arrive at a systematic clarification of hereditary associations in the field of mental disorders.—*L. S. Selling* (Institute for Juvenile Research).

3120. *Lieck, H. Ueber die diagnostische Bedeutung von Reflexen bei Nervenkrankheiten.* (The diagnostic significance of reflexes in nervous diseases.) Bonn: Kubens, 1931. Pp. 36.—*R. R. Willoughby* (Clark).

3121. *Longwell, S. G. A case study of mental deficiency due to birth injury.* *J. Juv. Res.*, 1934, 18, 36-41.—*H. L. Koch* (Chicago).

3122. *Martz, E. W., & Irvine, H. N. The results of physical and mental training on mentally deficient, birth lesion children.* *J. Juv. Res.*, 1934, 18, 42-51.—18 patients at Letchworth Village who had had birth injuries resulting not only in mental defect but also in di-, hemi-, or paraplegias were given, for periods ranging from 4 to 12 months, special physical training as well as academic and occupational instruction. There were, following training, gains in IQ in all but one case. Those who on the pre-training tests ranked as idiots gained most on the average, while the morons gained least. Among the 6 cases showing the most marked physical improvement were 3 para-, 1 di-, and 2 hemiplegics. No regular relation was apparent between the extent of physical improvement and gain in IQ. Increases in IQ were greater among the more mature than among the younger subjects. The effectiveness of the physical training seemed to be a direct function of its duration.—*H. L. Koch* (Chicago).

3123. *Mock, C. Beitrag zur Neurasthenia sexualis.* (Contribution to sexual neurasthenia.) Kiel: Schmidt & Klaunig, 1932. Pp. 18.—*R. R. Willoughby* (Clark).

3124. *Moore, T. V. The essential psychoses and their fundamental syndromes.* *Stud. Psychol. & Psychiat.*, 1933, 3, No. 3. Pp. 128 + x.—An attempt to meet the problems raised by difficulty in diagnosis in psychiatry through the use of Spearman's tetrad function. Syndromes found by this mathematical technique serve as a basis for the formulation of descriptions of certain psychoses. The first chapter is given over to a discussion of the symptoms selected and their definition. Since the tetrachoric method was adopted in intercorrelating symptoms the definitions of the limits for presence or absence of a trait had to be set. These are included under the definitions. The general groups of symptoms used were: (1) general, which involved historical material; (2) cognitive, such as time and space disorientation, hallucinations, memory, etc.; (3) emotional, such as irritability, euphoria, retardation; (4) instinctive and impulsive, such as stereotypism and mutism. The second chapter discusses the determination of the syndromes. This was made on a group of 402 subjects, 367 of whom were used in obtaining the intercorrelations. The next chapter discusses intercorrelation of the syndromes and attempts an interpretation of them. The following two chapters are concerned with the manic and depressive psychoses and with the praecox group of psychoses. The author finds five fundamental syndromes which he calls Catatonic g, Deluded g, Manic g, Cognitive g, and Constitutional Hereditary Depression g. "When a patient manifests any one of the five fundamental syndromes his condition can be conceived of as due: a. To the causal background represented by the super-general factor and also, b. To the specific causal background peculiar to the syndrome he has manifested or to two or more such specific causal backgrounds according as he manifests two or more syndromes." On the basis of this analysis the statement is made that manic-depressive and praecox conditions have something in common generally, although specifically different. Numerous appendices consisting of tables and charts on which the discussion is based are presented.—*D. Shakow* (Worcester State Hospital).

3125. *Nachmansohn, M. Die Hauptströmungen der Psychotherapie der Gegenwart.* (The principal currents of present-day psychotherapy.) Leipzig: Rascher, 1933. Pp. 250. RM. 6.40.—*R. R. Willoughby* (Clark).

3126. *Niederland, W. Seelisch-nervöse Leiden der Gegenwart.* (Present-day mental and nervous suffering.) Leipzig: Lühse, 1933. Pp. 112. RM. 2.80.—*R. R. Willoughby* (Clark).

3127. *Price, F. W. [Ed.] A textbook of the practice of medicine, including sections on diseases of the skin and psychological medicine.* (4th ed.) New York: Oxford Press, 1934. Pp. 204. \$11.50.—*R. R. Willoughby* (Clark).

3128. *Rosca, A. Debilitatea mintala.* (Feeble-mindedness.) Cluj, Rumania: Inst. de Psihol. Univ.

Cluj, 1931. Pp. xii + 76. Lei 60.—The social, educational, and especially psychological aspect of feeble-mindedness. I. Current methods used for diagnosing feeble-mindedness: tests plus clinical and biographical method. They ought to be combined. II. Causes and consequences of feeble-mindedness. Heredity is considered as the most important and decisive factor in causing feeble-mindedness. It accounts for about 85-90% of cases. Only the remainder can be explained by environment and education. Among consequences of feeble-mindedness: anomalies of conduct, delinquency, etc. Some eugenic and educational measures of prevention are also discussed. III. Education of the feeble-minded. Special methods ought to be used in order to correct and ameliorate to some degree feeble-mindedness. IV. Organization of the schools for feeble-minded children in Germany, France, Belgium, Austria, Switzerland, England and America. V. Suggestions for the organization and amelioration of the schools for feeble-minded children in Rumania.—*N. Margineanu* (Chicago).

3129. Rosenthal, S. P. Racial differences in the mental diseases. *J. Abn. & Soc. Psychol.*, 1933, 28, 301-318.—Although much has been written on the problem of racial differences in the mental diseases, as revealed by statistics, very little of it will stand careful scientific statistical techniques or examinations. Until this becomes possible, no sweeping generalizations are possible concerning the susceptibilities of races to the mental diseases. Statisticians seem to feel that the average question can be definitely solved by figures, and they are apt to ignore certain facts tending to show that such figures taken by themselves are of rather superficial importance. Sociological and economic questions have to be taken into consideration in trying to solve the problem of the comparative prevalence of insanity among races.—*C. H. Johnson* (Boston Psychopathic Hospital).

3130. Roubinovitch, J. La chronaxie des maladies mentales et nerveuses. (The chronaxy of mental and nervous diseases.) *Prog. méd.*, 1933, No. 13, 603-606.—The results from the experiments performed by Claude, Bourguignon, and Baruk show that the size of the vestibular chronaxy seems to be related to the intensity and depth of the catatonic state, and consequently to the more or less pronounced degree of disturbance in the cerebral functioning.—*Math. H. Piéron* (Sorbonne).

3131. Schmidt, F. Suizide und Suizidversuche im Verlaufe von Psychosen. (Suicide and attempted suicide in the course of psychoses.) Bonn: Trapp, 1932. Pp. 49.—*R. R. Willoughby* (Clark).

3132. Störing, W. Beitrag zur Paranoiafrage. (Contributions to the paranoia question.) *Arch. f. Psychiat. u. Nervenkr.*, 1932, 97, 270-289.—*R. R. Willoughby* (Clark).

[See also abstracts 3166, 3203, 3265, 3307, 3313, 3341.]

PERSONALITY AND CHARACTER

3133. Aulich, W. Untersuchungen über das charakterologische Rhythmusproblem. (Investigations on the characterological rhythm problem.) Halle: Klinz, 1932. Pp. 58.—*R. R. Willoughby* (Clark).

3134. Bernreuter, R. G. The measurement of self-sufficiency. *J. Abn. & Soc. Psychol.*, 1933, 28, 291-300.—The a priori postulation of a trait of self-sufficiency, based upon the free observation of the behavior of various individuals, has been justified through the construction of a test. The reliability of this S-S test was found to be about .84. Differences between various student groups who have experienced various degrees of home supervision and of social participation have been shown to be reliable, and in the expected direction. Low correlations were found between scores on the S-S test and scores on various other personality tests. Men were found to be more self-sufficient than women. Percentile norms have been prepared for each sex which permit the comparison of an individual with other college students.—*C. H. Johnson* (Boston Psychopathic Hospital).

3135. Bernreuter, R. G. The imbrication of tests of introversion-extroversion and neurotic tendency. *Psychol. Bull.*, 1933, 30, 665-666.—Abstract.—*J. F. Dashiell* (North Carolina).

3136. Bogardus, E. S. Avocations and personality. *Sociol. & Soc. Res.*, 1934, 18, 275-281.—Because of the intimate relationship shown to exist between avocations and personality, and because of the increasing growth of leisure time, avocational guidance is viewed as a necessity.—*J. R. Hilgard* (Stanford).

3137. Bonaparte, M. La structure psychique d'Edgar Poe. (The psychological structure of Edgar Poe.) *Hygiène ment.*, 1933, 28, 193-201.—The author believes that Poe's immortality, which is sometimes unjustly disparaged and sometimes falsely exalted, rests on his having achieved, as no one else has before or since him, the feat of skill of artistic sublimation of sado-necrophilism.—*Math. H. Piéron* (Sorbonne).

3138. Cantril, H., & Allport, G. W. Recent applications of the Study of Values. *J. Abn. & Soc. Psychol.*, 1933, 28, 259-273.—The Study of Values was designed to measure the relative prominence in adult personalities of six universal interests. Evidence accumulated since its publication shows that the reliability and validity originally claimed for it are approximately correct. The weakest feature of the scale is the low reliability of scores for the social value. The mean scores from several hundred additional cases confirm the published norms. New evidence shows that the test is uniformly successful in distinguishing the basic interests of contrasting occupational groups and that it discloses distinctive patterns of interest in different collegiate groups. Several experiments recorded demonstrate a clear relationship between values and conduct.—*C. H. Johnson* (Boston Psychopathic Hospital).

3139. Cavan, R. S. The Murray psychoneurotic inventory and the White House Conference inventory. *J. Juv. Res.*, 1934, 18, 23-27.—The Murray psychoneurotic inventory (with slight adaptations in the form used with girls) was given to all the eighth-grade boys and girls in seven Chicago grade schools and to 92 boys in a special school who could not adjust to the régime of the regular public school. Since the reliability coefficients (split-half method) computed on the basis of the returns from groups of 75 boys and 75 girls, were respectively .85 and .75, it is concluded that a small amount of revisional work will make the scale as reliable a one for girls as it is for boys. A short scale of 24 questions, used during some of the White House Conference investigations and composed of items chosen from those found to differentiate sharply between delinquents and non-delinquents by Cady, Mathews, and Slawson, yielded for a group of 420 junior high school pupils a reliability coefficient of .70. The Murray and the short inventory scores for 277 girls correlated .68; for 266 boys, .60. The short inventory differentiated clearly between normal and delinquent or maladjusted groups.—H. L. Koch (Chicago).
3140. Ellis, H. L'ondinisme. La cleptolagnie. (Undinism. Kleptolagnia.) (Trans. by Van Gennep.) Paris: Mercure de France, 1933. Pp. 272. 20 fr.—Math. H. Piéron (Sorbonne).
3141. Fantham, H. B. Charles Dickens: a biological study of his personality. *Character & Personality*, 1934, 2, 222-230.—Some of the personality traits of Dickens, such as his genial, vivacious and exuberant spirit, his hyperactivity, oversensitiveness and emotionality, his passion for social reform, and other traits are discussed in the light of modern endocrinology. He must have had a good balance between the functioning of the pituitary, adrenal and thyroid glands, but with the latter two dominating to some extent.—M. O. Wilson (Oklahoma).
3142. Fisher, V. E., & Marrow, A. J. Experimental study of moods. *Character & Personality*, 1934, 2, 201-208.—Moods of elation and despondency were induced in seven subjects under hypnosis in order to determine their influence upon free association reactions. The stimulus words were divided into four mood-association groups. The following are the averages of reaction times for each group of stimulus words and for each mood: (1) words without strong mood-associations: normal, 1.67; elated, 1.74; depressed, 2.29; (2) words with pleasant mood-associations: normal, 1.70; elated, 1.94; depressed, 2.50; (3) words with unpredictable mood-associations: normal, 1.77; elated, 2.01; depressed, 3.46; (4) words with unpleasant mood-associations: normal, 1.95; elated, 2.18; depressed, 3.62. Most subjects showed some increase in time in the elated over the normal, and all except one showed a marked increase of the depressed over the normal mood. The exception was judged to be a pre-schizophrenic type whose reactions showed no discernible mood variations. Possible causes of the quantitative and qualitative changes are discussed.—M. O. Wilson (Oklahoma).
3143. Flemming, E. G. Personality and the athletic girl. *School & Soc.*, 1934, 39, 166-169.—The purpose of the study was to determine what, if any, traits of personality may be associated with athletic ability or participation. High school girls, 84 in number, were the subjects of the investigation. Each girl was rated by at least 3 teachers on each of 46 personality traits, one of these being the characteristic *athletic*. In addition, for each girl there was obtained a record of participation in extra-curricular activities and a rating from each of her classmates on her general pleasingness. Association between athleticness and other personality traits was determined by the coefficient of contingency method. The coefficients were all low; hence it is concluded that the athletic girl, in the traits considered, tends not to differ from the average. There may have been a slight association in the group studied between athletic inclinations and good sportsmanship, beauty, liveliness, fairness, wide interest, honesty, helpfulness, pleasingness of voice, and power of being interesting in conversation.—H. L. Koch (Chicago).
3144. Helweg, H. Søren Kierkegaard. En psykiatrisk-psykologisk Studie. (Søren Kierkegaard. A psychiatric and psychological study.) Copenhagen: Hagerup, 1933. Pp. 395.—This is a very exhaustive psychoanalytic study of the famous Danish author, Søren Kierkegaard, in line with Helweg's earlier well-known studies of Grundtvig and H. C. Andersen. The author arrives at the general conclusions that Kierkegaard was of a manic-depressive constitution, which found expression in brief hypomanic attacks and depressive periods of longer duration, but, above all, in "mixed states" when a depressive basic mood often found release in an almost manic capacity for work. Extensive bibliography.—M. L. Reymert (Mooseheart Laboratory for Child Research).
3145. Margineanu, N. Personalismul lui William Stern. (Personalism of William Stern.) *Rev. de fil.*, 1930, 15, 290-314.—Stern's system, developed in the three volumes *Person und Sache*, is critically analyzed. Special attention is given to the second volume on *Human Personality*, which formulates a very suggestive theory of personality, and which avoids the separation between mind and body, still so characteristic of many German psychologists. On the methodological side special emphasis is given to the total approach to personality as unity.—N. Margineanu (Chicago).
3146. May, M. A. Measurements of personality. *Scient. Mo.*, 1934, 38, 73-76.—Methods of studying personality may be classified into records, reputation, observation, interview, psychological tests, experiments.—J. F. Dashiell (North Carolina).
3147. Mierke, K. Über die Objektionsfähigkeit und ihre Bedeutung für die Typenlehre. (The capacity for objectification and its significance for the theory of types.) *Arch. f. d. ges. Psychol.*, 1933, 89, 1-108.—This experiment was undertaken primarily to prove empirically the existence of both emotional and volitional objectification (projection) and to

study their constancy and perseverance. Because it was thought that the tendency toward objectification would show itself irrespective of temperament, the subjects were chosen to represent extremes of psychological types according to Kretschmer. However, since the first results indicated such an extreme difference in the tendency toward objectification for the two groups, the remainder of the research was devoted largely to the study of the relationship between these two factors. 35 boys, all about nine years of age at the beginning of the experiment, served as subjects. The tasks consisted of reproducing geometrical figures, letters, and numbers from small bits of colored paper. In the experiment on emotional objectification, the subjects were forced to do unpleasant tasks with the paper of their favorite color and pleasant tasks with paper of the least liked color. The number of series of such tasks necessary before the subject reversed his preference for the colors is taken as the ability or tendency of the individual toward objectification. In this respect, a large and significant difference was found between the two groups which are classified as extroverts and introverts, the former reversing their preferences in an average of 19.85 series and the latter in 101.8. Perseveration was then studied by determining the number of repetitions necessary (with conditions reversed) for a return to the original order of preference. Again, a complete separation of the two groups was found, with the introverts showing the greater amount of perseveration. Other characteristic differences of the two groups are discussed, and it is suggested that the possession of varying amounts of this tendency toward objectification constitutes the basic difference between the cyclothyme and schizothyme. However, no definite relationship was found between this trait and bodily build. An abbreviation of the experimental technique is proposed as an individual character test.—*E. L. Kelly* (Connecticut State College).

3148. Miles, W. R., & Miles, C. C. *Personality type and metabolic rate.* *Psychol. Bull.*, 1933, 30, 667.—Abstract.—*J. F. Dashiell* (North Carolina).

3149. Rusu, L. *Goethe.* (Goethe.) Cluj: Tipografia Viata, 1932. Pp. 126. Lei 40.—A psychological interpretation of Goethe's personality and work. The main topics: the formation of Goethe's personality, considered as the development of a certain inherited constitution and a certain social environment; the psychological value of his work; the psychological interpretation of the notion of "demon," etc. The greatness of Goethe is considered to consist in the richness of his life. There are much better poets, dramatists, and scientists than Goethe, but nobody included in the same personality such different and rich sides of human life and creation as he did. What Goethe called his "demon" seems to consist in the lack of adaptation of the superior mind to the common environment and in the urge for creation, at least in imagination, of another world, with other values, which satisfies the inner needs of the great personality. In one chapter a psychological inter-

pretation of Faust is given. The psychology which the author uses is to a great extent the psychology developed by Goethe himself.—*N. Margineanu* (Chicago).

3150. Stefanescu, G., Rusu, L., Rosca, A., & Todoranu, D. *Fisa personala.* (Personality inventory.) Cluj, Rumania: Inst. de Psihol. Univ. Cluj, 1933. Pp. 28.—The topics of the inventory: I. Antecedents. A. Concerning the family: psychophysiological traits of parents (health, intelligence, abilities, handicaps, etc.); their educational level; their social position (their moral conduct, religion, relation between father and mother, etc.); their economic position (income, etc.). B. Concerning the subject: psychophysiological traits (health, diseases, age when walking and talking began); educational data (school, educational degrees, moral conduct in school); social environment (associations, sociability, etc.); economic status (money spent for education of the child). II. Present psychophysiological structure of personality. A. Physiological traits (health, fatigability, constitution, force, etc.). B. Psychological traits. This is the fundamental part of the inventory. (1) Intellectual abilities and intelligence (attention, perception, memory, imagination, thinking, general intelligence, etc.). In connection with every ability there are many items to be noted. For instance, in the case of thinking the items are: type, direction of thinking, clearness, originality, power of criticism, rapidity, depth. (2) Traits of temperament and character (drives, temperament, character and social attitudes). In connection with every trait there are many items. For instance, under character the items are: unity and integration, stability, richness, power of will, diligence, confidence, manners, etc. For every item there are five degrees listed. The rater's task is to check the degree which characterizes the subject. The inventory is designed especially for use in high school.—*N. Margineanu* (Chicago).

3151. Stefanescu, G., Rusu, L., Rosca, A., & Todoranu, D. *Instructiuni pentru utilizarea fisei personale.* (Instructions for the use of the personality inventory.) Cluj, Rumania: Inst. de Psihol. Univ. Cluj, 1933. Pp. 48.—After a brief discussion and introduction into the nature and aim of the inventory, each item is discussed specifically in order to explain the correct notation. Special attention and care are given to the standardizing of the answers. The last chapter deals with the interpretation of the results. Objective methods are devised which facilitate an objective and correct interpretation.—*N. Margineanu* (Chicago).

3152. Stone, C. L. *The personality factor in vocational guidance.* *J. Abn. & Soc. Psychol.*, 1933, 28, 274-275.—Students at Dartmouth, after completing the Allport-Vernon "Study of Values," designated the occupation to which they most strongly inclined. The common-sense expectations by the inventory for each occupation was surprisingly high and suggested the possible value of such an approach to the study of

interests in the cause of more humane and efficient vocational guidance.—C. H. Johnson (Boston Psychopathic Hospital).

3153. Suzuki, M. *Jinbutsu hyoka ni okeru shotokusei no hensa*. (Deviation of estimation on several characteristics of personality.) *Oyo Shinri Kenkyu*, 1933, 1, 419-422.—25 characteristics which we attribute to other personalities were selected, and the grade of difficulty in agreement of estimation among subjects was investigated. Deviation of estimation was great with regard to sincerity, self-reliance, conscientiousness, generosity, and the spirit of co-operation, and small with respect to cleanliness, health, perseverance, courage, and intelligence. The author accepts Hollingworth's view that agreement among individuals is found in matters objectively ascertained, but it is rather difficult to get a unanimous judgment on personal reactions.—R. Kuroda (Keijo).

3154. Symonds, P. M. *Measuring the personality adjustments of high school pupils*. *Psychol. Bull.*, 1933, 30, 664-665.—Abstract.—J. F. Dashiell (North Carolina).

3155. Todoranu, D. *Psihologia temperamentului*. (Psychology of temperament.) Cluj, Rumania: Inst. de Psihol. Univ. Cluj, 1932. Pp. iv + 170. Lei 100.—The main aims of the book are: (1) theoretical discussion of different theories and critical analysis of certain points of view and ideas which occur most often and are considered most important, and (2) an attempt to establish objective methods of diagnosis. Among the main theories discussed are those of Davenport, Downey, Jastrow; Kretschmer, Ewald, Klages; Decroly; Heymans and Wiersma; McDougall. Special credit is given to McDougall, Kretschmer and Downey. By temperament is meant chiefly the form, way and rhythm of behavior. In its structure and configuration are distinguished three central factors: activity, emotivity, and psychic intensity or force. The aspects of the activity factor are: rapidity of decision, rapidity of reaction, persistency and flexibility (*Umstellung*). Emotionality aspects are: variation between hypo- and hypersensibility. The intensity factor is manifested in psychological tension (relation between potential and actual energy), motor impulse (degree of active energy) and inhibition. By taking into consideration the various groupings of these factors and aspects the author distinguishes two great types, which to a great extent coincide with Kretschmer's cyclothymic and schizothymic types. The researches, made upon 100 subjects, are based on three methods: (1) tests, (2) observation, and (3) questionnaire. The aim of the last two methods is to control and verify the test method. It is claimed that the experimental and statistical methods need to be completed by the clinical method of observation.—N. Margineanu (Chicago).

[See also abstracts 2853, 2909, 2922, 2942, 3083, 3091, 3102, 3103, 3207, 3275, 3332, 3338, 3347, 3348, 3355, 3358.]

SOCIAL FUNCTIONS OF THE INDIVIDUAL

3156. Behn, S. *Über Vergebung und Entschuldigung*. (Concerning forgiveness and excuse.) *Arch. f. d. ges. Psychol.*, 1932, 86, 55-62.—"To explain all" does not mean "to forgive all." Only that which can be judged can be forgiven. That which is simply explainable cannot be forgiven, because it cannot be truly judged. But the zone of forgiveness is broader than strict accountability for action. That which may be excused should also be forgiven. An occasional disturbance or misstep in an otherwise reasonable career is excusable, provided such a disturbance is not antisocial. The same applies to many victims of severe intellectual, emotional, and moral disturbances who may nevertheless achieve great things. The social criterion facilitates a differential diagnosis.—J. J. Carlson (Aurora-on-Cayuga).

3157. Bell, E. H. *Social stratification in a small community*. *Scient. Mo.*, 1934, 38, 157-164.—In a small mid-western town social distinctions, while denied, are apparent. They are based upon occupational levels mainly, with permanence in the community a strong factor.—J. F. Dashiell (North Carolina).

3158. Benedict, R. *Myth*. *Encyclopedia of the Social Sciences*, 1933, 11, 178-181.—A discussion of the functions of myths among primitive and modern peoples. The author concludes that myth is universally the wishful projection of a universe of will and intention. Man in all his mythologies has expressed his discomfort at a mechanistic universe and his pleasure in substituting a world that is humanly motivated and directed.—H. W. Karn (Clark).

3159. Blumensohn, J. *The fast among North American Indians*. *Amer. Anthropol.*, 1933, 35, 451-469.—Fasting was widespread in the religions of the North American Indians, but varied in meaning and function in different culture areas. This paper (1) contrasts the Central Algonkian conception of the fast with that of tribes in areas other than the great plains; (2) compares the Central Algonkians with the plains tribes; and (3) shows that the specific association of fasting with the pity of spirits peculiar to the Algonkian is due to the coalescence of two unconnected religious elements common to the area. Outside of the plains and Great Lakes regions, fasting was sometimes a mere traditional practice, at other times rationalized as a means of purification, penitence, moral training, or acquiring special powers. Thus in the plains area, fasting was employed as a part of the magical technique, an accessory of worship, a mode of inducing visions, a form of sacrifice, or a purification rite, and in general as a religious practice. A unique emotionalization of the fast occurs among the Central Algonkians. It is used to bring about a personal relation with the supernatural. Its specific object was to make the faster weak and pitiable, thus evoking the compassion and assistance of the spirits. These types of attitudes in fasting are illustrated by numerous references, and a bibliography of 49 titles is appended.—C. M. Diserens (Cincinnati).

3160. Bugard, P. *Musique et pensée symbolique*. (Music and symbolic thinking.) Paris: Delanis, 1933. Pp. 186.—*Math. H. Piéron* (Sorbonne).

3161. Dewey, J. *Art as experience*. New York: Minton, Balch, 1934. Pp. 362. \$4.00.—*R. R. Willoughby* (Clark).

3162. Dodge, R. *Mental nearness*. *J. Abn. & Soc. Psychol.*, 1933, 28, 233-244.—Nearness of minds is a feeling of community between one person and others. It not only exists solely in the mind of the person who experiences it, but it is entirely free from any implication of necessary reciprocity. Mental distance is not dependent upon spatial relationships, so arbitrary units like millimeters are not applicable. Like the graduations of sentiments, measurement is possible by the rank order method of the degrees of mental nearness. One of the factors that sometimes evokes feelings of nearness is physical propinquity. Yet too close propinquity not infrequently destroys what lesser degrees evoke. Most people crave physical nearness to those who are mentally near to them. All family ties count in the gradient. Frequently there is an inhibitory effect of dissimilar mores on the feeling of nearness. A common language is not a *sine qua non* for mental nearness, but it has obvious importance as an instrument for promoting intellectual community.—*C. H. Johnson* (Boston Psychopathic Hospital).

3163. Dyroff, A. *Gedächtnis und Sittlichkeit*. (Memory and morality.) *Arch. f. d. ges. Psychol.*, 1932, 86, 63-78.—A good and accurate memory is only a means, or, as Else Wentscher formulates it, a *conditio sine qua non* of a well-rounded morality. Memory is never an end in itself.—*J. J. Carlson* (Aurora-on-Cayuga).

3164. Ellis, H. *L'art de l'amour*. (The art of love.) Paris: Mercure de France, 1933. Pp. 288. 20 fr.—*Math. H. Piéron* (Sorbonne).

3165. Freyberg, H. *Experimentelle Untersuchungen über die ästhetische Gefühlsbetonung von Akkorden und Akkordfolgen (einschliesslich Akkordauflösungen)*. (Experimental investigations of the esthetic feeling emphasis of harmony and its results and resolutions.) Halle: Akad. Verl., 1934. Pp. 69. RM. 3.80.—*R. R. Willoughby* (Clark).

3166. Galdo, L. *Valore della scrittura dal punto di vista della psico-patologia*. (The value of writing from the point of view of psychopathology.) *Scritti onore Kiesow*, 1933, 149-156.—The act of writing is the highest dynamic expression of one's psychophysiological organism. The results of graphological researches show clearly the possibility of applying the experimental method to moral data and of constituting a new reactive series useful in all psychological applications. Graphology needs to be made quantitative and united with other studies of writing. The age, sex, moral, and intellectual traits of subjects may be easily determined. In pathology the study of writing has an important diagnostic value, particularly when joined with other methods.—*R. Calabresi* (Rome).

3167. Gemelli, A., & Pastori, G. *Analyse électrique du langage. I. Recherches sur la nature des voyelles*. (Electric analysis of language. I. Investigations concerning the nature of vowels.) *Arch. néerl. de phon. expér.*, 1934, 10. Pp. 29.—Five Italian vowels, *a, e, i, o, u*, were graphically recorded as spoken by male and female voices. The authors believe that the harmonic theory (Helmholtz) and the inharmonic theory (Herman and others) of vowels are both inadequate for vowel study, because vowels in normal speech contain at least three periods: a uniform period which makes up the central part of the vowel and may be short or extended according to the entire length; two non-uniform periods at the beginning and end of the vowel respectively, which vary little with its length. The authors conclude that the vowels *a, i*, and *u* have characteristic structures, while *o* and *e*, and theoretically innumerable others lying among these three, are transitional vowels. The vowel *a* contains partials much higher in amplitude than its fundamental; its uniform phase is highly resistant to change and represents an advanced stage in the development of phonemes. The vowel *i* has the maximum amplitude on the fundamental or its octave and contains very high partials. The vowel *u* has a fundamental with a high amplitude; its uniform period is made up of one or more tones, but the phase of these partials must be placed in a definite relationship to the fundamental. Both *i* and *u* are unstable as phonemes and have not reached the stable state in their evolution.—*C. V. Hudgins* (Clarke School).

3168. Glueck, S., & Glueck, E. T. *One thousand juvenile delinquents*. Cambridge: Harvard Univ. Press, 1934.—In an effort to gauge the effectiveness of one of the most modern devices for coping with juvenile delinquency—a juvenile court with a clinical adjunct—a follow-up study was made of 1000 boy delinquents who appeared before the Boston Juvenile Court between the years 1917 and 1922 and were sent by the court to the Judge Baker Foundation for examination and recommendations as to treatment. The research reveals that 88.2% of these boys continued to recidivate after the end of the period of "treatment," which is defined as the time during which the clinical recommendations were in effect. The reasons why the court to a very considerable extent did not carry out the recommendations of the clinic indicate the great lack of unification in the handling of delinquents, not only on the part of court and clinic, but between them and the various other social agencies whose work bears any relationship to the treatment of juvenile offenders. This investigation not only contains an analysis of the juvenile court and clinic in its historical setting, but also describes in great detail the family, social, and personal history of the 1000 offenders studied, the recommendations made by the clinic to the court, the extent to which these recommendations were followed, and the reasons for non-compliance by the court with them; and after describing the recidivism of the group following treatment, all the background factors in the lives of these juveniles are related to the outcomes of their

cases. On the basis of the results a prediction chart has been built up and many helpful clues to treatment revealed. In the last chapter a comprehensive program for coping with juvenile delinquency is outlined. The major conclusion of the research is that a clinic and court cannot operate in vacuo; in all their efforts to cope with delinquency they must be part of a well-integrated community program for crime prevention.—*E. T. Glueck* (Harvard).

3169. Göttel, W. *Experimentelle Beiträge zur Untersuchung des schnellen und des gestörten Schreibaktes*. (Experimental contributions to the study of rapid and interrupted writing.) *Arch. f. d. ges. Psychol.*, 1933, 89, 291-370.—Increased speed of writing and the simultaneous carrying out of other activities both resulted in marked changes in the handwriting of 8 subjects who were required to copy passages which appeared before them on a rotating drum. When writing rapidly, the subjects were found to slant the letters much more to the right, enlarge the width of the letters, and increase the length of the last stroke of each word. Samples written while performing mental and manual tasks showed marked breaks in continuity. The findings are compared with those of previously reported studies and their significance for graphology is discussed.—*E. L. Kelly* (Connecticut State College).

3170. Gottschalk, H. *Ein Beitrag zur Psychologie der Eifersucht*. (A contribution to the psychology of jealousy.) Hamburg: Proctor, 1933. Pp. 86.—*R. R. Willoughby* (Clark).

3171. Greene, E. B. The legibility of typewriter script and linotype. *Psychol. Bull.*, 1933, 30, 670.—Abstract.—*J. F. Dashiell* (North Carolina).

3172. Grossart, F. *Zur Psychologie des ästhetischen Verhaltens*. (A contribution to the psychology of esthetic conduct.) *Arch. f. d. ges. Psychol.*, 1932, 86, 115-132.—The author summarizes his discussion by a definition: esthetic conduct is the expression of a peculiar specific striving of man. It consists of a disinterested, i.e., an unselfish, sympathetic comprehension of natural or artificial objects as manifestations of objective living forces, strivings in the broadest sense of the word. The pleasure associated with this comprehension is a peculiar blessing which is experienced only in this special relationship to the phenomena of foreign spiritual values. It is conditioned—considering first the object—in its shade, intensity and depth, by the height and depth of the apparent forces and by the degree of purity and completeness, i.e., by the beauty, of the form in which they are expressed; considering the subject, on the other hand, by the strength and developmental level of his esthetic striving, as well as by the clarity of his comprehension, his mental breadth and perspective; in other words, by his esthetic viewpoint.—*J. J. Carlson* (Aurora-on-Cayuga).

3173. Haase, E. *Zur Psychologie und Didaktik der Menschenkunde in der Volksschule*. (The psychology and didactics of teaching physiology in the primary school.) *Zsch. f. päd. Psychol.*, 1932, 30, 420-425.—The author succeeded in arousing interest

in physiology among young girl pupils by evoking and treating in detail individual questions. 65.7% of these questions were related to pathological phenomena, 16.4% to physiological phenomena, 12.4% to individual peculiarities, and 6% to questions of an anatomical nature.—(Courtesy *Année psychol.*)

3174. Hamlin, H. M. *Residences in 1932 of Iowa high-school graduates 1921 to 1925*. *J. Educ. Res.*, 1934, 27, 524-528.—There has been much migration by this group not only from rural districts but from urban districts as well.—*S. W. Fernberger* (Pennsylvania).

3175. Harriman, P. L. *Ethical discrimination as a function of intelligence*. *School & Soc.*, 1933, 38, 812.—34 adult women in a state industrial home for offenders were given the Stanford-Binet intelligence test and the Thurstone Proverbs Test, alleged to measure ethical discrimination. The returns from the two tests correlated .92. A group of 20 women judged to be fairly well endowed intellectually scored somewhat better on the proverbs than the mean twelfth grader, according to the test norms; whereas a group of 14, judged to be mentally inferior, averaged somewhere between the eighth and ninth grade norms. The institution matrons reported that the duller of their charges seemed to have less sense of guilt or desire to reform than did the brighter.—*H. L. Koch* (Chicago).

3176. Harvey, O. L. *The measurement of handwriting considered as expressive movement*. *Psychol. Bull.*, 1933, 30, 663.—Abstract.—*J. F. Dashiell* (North Carolina).

3177. Hildreth, G. *Reversals in reading and writing*. *Psychol. Bull.*, 1933, 30, 670-671.—Abstract.—*J. F. Dashiell* (North Carolina).

3178. Hirschel, G. *Frauenkult und Minnedienst*. (Woman-worship and love-service.) *Sexus*, 1933, 1, 56-60.—Almost all men, from fools to philosophers, have voiced their opinions upon the science of sexuality, yet even today little is known about the subject. The great majority of persons have managed to find gratification for themselves through physical means, but that small stratum of society which for various reasons has not been able to do this, creates for itself a dream world in which is found woman-worship in its most elemental form. Here woman is elevated above man and remains forever unattainable. This explains the position of "Mary, Queen of Heaven" as well as that of the love princesses of reality and fiction, whom their admirers placed upon a plane so high that woman became something more than human. Out of this cult of woman-worship has grown a mass of lyric literature to which all civilized nations have been generous contributors, and through which is expressed every possible opinion and moods of every description.—*L. S. Selling* (Institute for Juvenile Research).

3179. Holland, B. F. *The effect of the length and structure of sentences on the silent reading process*. *Psychol. Bull.*, 1933, 30, 668-669.—Abstract.—*J. F. Dashiell* (North Carolina).

3180. Hough, W. The origin and development of metrics. *Amer. Anthropol.*, 1933, 35, 443-450.—The use of measures is one of the distinctive characteristics of man, attained only after thousands of years consumed in the evolution of appropriate ideas. These ideas seem to begin in perception of certain aspects and particularly the freely moving divisions of the human body in their relation to parts of the environment which are the focus of attention and action. Popular and archaic metrical terms in most languages illustrate this. The first primary measure was that of length, based on the arm and its natural divisions. The concept of weight grew out of experiences with the sense of balance and the invention of the suspended beam. The idea of area is obscure, but may have emerged from primitive efforts in geometrical art. The idea of direction, possibly instinctive, was defined from the positions of the sun. Ideas of capacity and time arise out of the necessities of agriculture. Location starts in the primitive distinction between "here" and "there." Numbers are at first things, and emerge from pictorial or other collections of repeated elements serving as records.—C. M. Diserens (Cincinnati).

3181. Katz, D., & Braly, K. Racial stereotypes of one hundred college students. *J. Abn. & Soc. Psychol.*, 1933, 28, 280-290.—The degree of agreement among the students in assigning characteristics from a list of 84 adjectives to different races seemed too great to be the result solely of the students' contacts with members of those races. Individual experience may have entered into a student's judgment, but it probably did so to confirm the original stereotype which he had learned. Because human beings from time to time exhibit all kinds of behavior he could find confirmation of his views. By omitting cases which contradict the stereotype, the individual becomes convinced from association with a race that its members are just the kind of people he always thought they were. The manner in which public and private attitudes are bound up together was shown in the order of the 10 racial and national groups as determined by the definiteness with which students assigned characteristics to them. The definiteness of the stereotyped picture of a race, however, had little relation to the prejudice exhibited against that race.—C. H. Johnson (Boston Psychopathic Hospital).

3182. Kutzner, O. Zur Psychologie der Strafe. (The psychology of punishment.) *Arch. f. d. ges. Psychol.*, 1932, 86, 159-170.—By punishment we seek to prevent future violations of our moral code. But the administrator of the punishment is in turn judged by the victim of it. A punishment which is deemed unfair misses its goal. Lack of insight into the value of prohibitions is at the basis of many transgressions. This is particularly true of children and adolescents, who must adapt to a world of adult standards. They should be given insight into these values. The adult should also consider the child's stage of will development. Punishment, when administered, should be related to the desired goal as closely as possible, and should be executed not in the spirit of revenge, but

with an attitude expressing the desire to help the transgressor, and with a firm belief in the good which exists in him.—J. J. Carlson (Aurora-on-Cayuga).

3183. Langford, R. C. Ocular behavior and the principle of pictorial balance. *Psychol. Bull.*, 1933, 30, 679.—Abstract.—J. F. Dashiell (North Carolina).

3184. Latif, I. The physiological basis of linguistic development and of the ontogeny of meaning. Part II. *Psychol. Rev.*, 1934, 41, 153-176.—Understanding of words precedes speech. The earliest speech sounds are erroneously assigned meaning by the hearer. The child's meanings develop precision along two lines: more adequate connotation, and more restricted denotation. Early sources of speech meanings are (1) spontaneous baby sounds, and (2) imitation of the sounds of nature. The "little language" of the child develops independently of formal speech, of which mispronunciation is one important feature; and another is the tendency toward "gross generalization." The meaning of children's spoken words is contained in the action accompanying them, i.e., the words are holophrases. Finally, the child's speech is egocentric, intended to convey meaning to himself more than to others. The progress from undifferentiated holophrases to articulate sentences is a process of analyzing the separate steps in the meaning out of the whole.—A. G. Bills (Chicago).

3185. Lowie, R. H. Crow prayers. *Amer. Anthrop.*, 1933, 35, 433-442.—The author presents a number of prayers collected among the Crow Indians. The prayers are in the native language, and are accompanied by literal and prose translations. They illustrate the attitudes and situations involved in prayer, and show that although the sun is predominant in the religious consciousness of these Indians, supplementary powers, not necessarily identified with the sun, are recognized. These beings seem unconnected with any preconceived mythological figures, but are spontaneous inventions of the moment, transient personifications of any part of the cosmos to which supernatural power is momentarily ascribed.—C. M. Diserens (Cincinnati).

3186. Luetkens, C. Die Soziologie der amerikanischen Intelligenz. (The sociology of American intelligence.) Stuttgart: Enke, 1933.—R. R. Willoughby (Clark).

3187. Meier, N. C. A genetic approach to the problem of artistic genius. *Psychol. Bull.*, 1933, 30, 678.—Abstract.—J. F. Dashiell (North Carolina).

3188. Mencken, H. L. Treatise on right and wrong. New York: Knopf, 1934. Pp. viii + 331 + xix. \$3.00.—The work is largely a history, with abundant critical comment, of the ethical systems incorporated into current European and American morality. An estimate is appended of the present status and probable development of social relations. There is a bibliographical note of 12 pages.—R. R. Willoughby (Clark).

3189. Meyer, A. Religiöse Pseudepigraphie als ethisch-psychologisches Problem. (Religious falsification as an ethical-psychological problem.) *Arch.*

f. d. ges. Psychol., 1932, 86, 171-190.—The author gives significant examples from Hebrew, Greek and Christian writings, particularly the gospels and other New Testament documents, to illustrate a common and rather favored medium of representation, viz., literary falsification. Thus by the assumption of a distinguished name, and by the use of details and speech characteristic of the time depicted, beliefs or fictitious events are given the semblance of truth. The motives behind such falsification are discussed. In its ancient form it was used in the interests of serious propaganda, by believing and well-meaning persons. To write in one's own name was by some regarded as presumptuous. A different spirit prompted the falsifications of the early middle ages, which were made in the interests of priestly and papal power, while those of modern times too often have business interests behind them. The attitude of the church has been to accept or to reject according to the standard of ecclesiastical truth rather than literary authenticity. In most cases we are dealing with an ancient form of literary creation, by means of which great figures of the past might be made to live again in the interest of truth.—*J. J. Carlson* (Aurora-on-Cayuga).

3190. **Michelson, T.** *Narrative of an Arapaho woman.* *Amer. Anthropol.*, 1933, 35, 595-610.—This account, obtained from an Arapaho woman seventy-seven years of age, is full of intimate details concerning the education, marriage, and domestic life and amusements of a woman belonging to a primitive tribe. Copious notes on the institutional life of the Arapaho, and a list of ethnographical works dealing with this tribe, are added by Michelson.—*C. M. Diserens* (Cincinnati).

3191. **Morice, A. G.** *Carrier onomatology.* *Amer. Anthropol.*, 1933, 35, 632-658.—The student of primitive psychological activities should be interested in the origin, nature, and use of personal names among uncultured peoples, though few studies of this type have appeared. The author presents a strictly onomatological study of common personal names, hereditary and feminine names, and geographical names found among the Carrier Indians, a section of the Denés of British Columbia. The natives employ personal names to associate their fellows mentally with past events, bodily or temperamental peculiarities, occurrences connected with their birth, or animals which they seem to resemble. Hereditary names exist but are not used continuously, since custom forbade using again the name of a person dead within the memory of living persons. Geographical names are based on local tradition or similarities in nature. They illustrate the intensely realistic character of the Indian mind.—*C. M. Diserens* (Cincinnati).

3192. **Muntsch, A.** *Cultural anthropology.* Milwaukee: Bruce Pub. Co., 1934. Pp. 421. \$3.75.—*R. R. Willoughby* (Clark).

3193. **Nimkoff, M. F.** *A family guidance clinic.* *Sociol. & Soc. Res.*, 1934, 18, 229-240.—Results obtained in the treatment of domestic discord at the Institute for Family Guidance at Lewisburg, Pennsylvania, are reported. Routine diagnostic procedure

included a medical report, psychological tests, a psychiatric examination if necessary, and finally, as most important, a developmental or social history of the two persons. Each case was then analyzed in terms of its "constellation of tensions" and the sources of stress were sought in the interaction of the two personalities and in their social situation. Approaches commonly utilized in treatment were (1) clarification, (2) information, and (3) remotivation. Case histories briefly illustrate successful treatment.—*J. R. Hilgard* (Stanford).

3194. **Osgood, C.** *Tanaina culture.* *Amer. Anthropol.*, 1933, 35, 695-717.—This is an account of an Athapaskan-speaking people of northern Alaska. The discussions of native amusements and arts, war, social life, classes and organization, the institution of the potlatch, and the sections on custom and religion, offer many details of psychological interest.—*C. M. Diserens* (Cincinnati).

3195. **Parlog, C.** *Psihologia desernului.* (Psychology of drawing.) Cluj, Rumania: Inst. de Psihol. Univ. Cluj, 1932. Pp. iv + 170. Lei 150.—The evolution of drawing and its objective diagnosis. After a brief introduction to the problem and a brief discussion of previous theories and researches, the author selects and organizes a set of objects for drawing (objects, stories, etc.). They are given to 3500 children, both girls and boys, between 5 and 15 years old. A system of notation in points is elaborated. It is applied to all the tests. Frequency curves are devised for every age. A growth curve is also devised. Thus the author succeeds in establishing an objective drawing scale for children between 5 and 15 years. The number in points for every year is given, as well as the variation within each year. In regard to the evolution of drawing three periods are distinguished: (1) The preliminary period of scribbling, which characterizes children between 2 and 5 years; the general tendency of the child is to draw everything as a cell. (2) The period of schematic drawing. It characterizes children between 5 and 9 years. The child is able to draw the human body in a rather complete scheme, but only when seen in direct front view. (3) Realistic period. The child is able to draw the body as seen in profile and also in action.—*N. Margineanu* (Chicago).

3196. **Parsons, E. C.** *Some Aztec and Pueblo parallels.* *Amer. Anthropol.*, 1933, 35, 611-631.—Many parallels exist between Aztec and Pueblo cultures. These include impersonation of the gods, the use of ceremonial masks, similarity of therapeutic practices carried on by persons distinct from the priesthood, the conception of the earthly paradise as the home of the rain gods, myths of a horned serpent, fasting and continence as a feature of ritual, the conception of serpent guardians of roads, the introduction of burlesque into ritual, dances, calendrical similarities, social and familial organization, and a similar system of communal service, in which judicial and executive offices are blended. To this impressive list of parallels many partial parallels in pantheons and tabus are added, and Parsons offers

an interesting hypothesis on the nature of Aztec human sacrifice based on Pueblo ideology. The object may have been to convert the dead enemy into a helpful rain spirit.—C. M. Diserens (Cincinnati).

3197. Perl, R. E. A review of experiments on humor. *Psychol. Bull.*, 1933, 30, 752-763.—An historical survey of experimental as contrasted with theoretical studies leads to the conclusions that only a meager start has been made in this field and that methods must be devised to overcome inherent difficulties.—J. F. Dashiell (North Carolina).

3198. Peschke, K., & Plaut, P. Notzuchts-Delikte. Ihre forensische Bedeutung und Begutachtung. (Crimes of violation. Their forensic meaning and treatment by experts.) *Abh. a. d. Geb. d. Psychotherap. u. med. Psychol.*, 1930, Heft 14. Pp. 98.—The monograph is divided into three parts. The first part contains a discussion of the concept of rape, its relation to the psychology of sex, and the juristic and psychological conceptions of force or violence. The second part is concerned with the more specific problem of punishment by law for this offense. The last part is devoted to the tasks and limits of forensic expert judgment.—E. H. Kemp (Clark).

3199. Potter, La F. Strange loves; a study of sexual abnormalities. New York: Dodsley, 1934. Pp. 252. \$2.50.—R. R. Willoughby (Clark).

3200. Radin, P. The racial myth. New York: Whittlesey House, 1934. Pp. 150. \$1.50.—R. R. Willoughby (Clark).

3201. Ritschl, O. Die doppelte Wurzel des guten Willens. (The double root of the good will.) *Arch. f. d. ges. Psychol.*, 1932, 86, 33-54.—Dutiful activity and striving for the ideal are very dissimilar in origin, even though, in the course of moral development, they may become united or even indistinguishable. The correlate of dutiful behavior is a law, whether external or self-imposed. Every ideal endeavor, on the other hand, springs from involuntary, subjective impulses and cannot be compelled. As a rule it is not the original intellectual product of the person who adopts it. Dutiful activity is retrospective; idealistic striving is directed forward. The demands of obedience can be fulfilled, even surpassed; the idealist can never fully attain the goal of his strivings. Through conscience and obedience to moral laws idealistic endeavors are limited to actions which do not violate the demands of duty. Man is free in so far as he is able to impose laws upon himself and others. In so far as he follows these laws he is not free. Only in ideal perspective can moral obedience and idealistic striving be synthesized into a harmonious unit. Such a concept, however, has value in that it may serve as the ideal measure for good among men, wherever and to whatever extent it exists. The views of Max Wentscher and Kant are discussed.—J. J. Carlson (Aurora-on-Cayuga).

3202. Robinson, F. P. The tachistoscope as a measure of reading perception. *Psychol. Bull.*, 1933, 30, 667-668.—Abstract.—J. F. Dashiell (North Carolina).

3203. Rosca, A. Psihopatologia deviatilor morali. (Psychopathology of moral deviation.) Cluj, Rumania: Inst. de Psihol. Univ. Cluj, 1931. Pp. viii + 110. Lei 60.—Theoretical and practical aspects of the problem are considered. A critical analysis of various theories devised to explain the moral deviation is given. We cannot speak about a special "moral sense" which is lacking in the case of insane people. There is not a qualitative and fundamental difference between sane and insane people; there is only one of degree. The organization of tendencies and their modes of satisfaction is different in the case of insane people. This organization can be inherited or acquired and conditioned through the environment. The next chapters deal with the organization of psychological clinics, institutions for correction, and prisons in Germany, Belgium, France, Austria, England, Switzerland, and America. The institutions of these countries, except America, have been visited by the author. His discussion is based chiefly on his impressions. The last chapter deals with Rumanian prisons and institutions for correction. Some suggestions are made for a better organization.—N. Margineanu (Chicago).

3204. Roucek, J. S. Experiments in the measuring of intelligence and knowledge of Czechoslovak university students. *School & Soc.*, 1933, 38, 709-710.—The author reports some of the findings of Otakar Matoušek in an investigation carried out on the students of Charles University in Prague. On the basis of a testing program the latter concluded that the women students were, on the average, more intelligent than the men; half the students cheated, the women indulging in the practice more than did the men; the command of the mother tongue was not impressive; most students knew enough English to comprehend a simple passage, but many knew no German and the knowledge of French corresponded generally to that required in a regular first half year course. With respect to modern social, political, and economic problems and personages as well as with respect to the fundamentals of biology, geography, and art the group was relatively uninformed.—H. L. Koch (Chicago).

3205. Saudek, R. Can different writers produce identical handwritings? *Character & Personality*, 1934, 2, 231-245.—Law and commerce, as well as graphology, for centuries have taken for granted that the handwriting of no two individuals would ever show the same idiosyncrasies. However, after examining the handwriting specimens of 234 pairs of identical twins, the author concludes that "On the average we may expect to come across identical handwritings once in about ten thousand persons." This holds for identical twins alone, and does not include pairs of unrelated individuals whose handwriting is sufficiently similar to be judged as written by the same individual, for the existence of which the author has some available data.—M. O. Wilson (Oklahoma).

3206. Schmidt, H. Das Ethos in den Erzählungen arabischer Bauern in Palästina. (The ethics of Arabian peasants in Palestine as revealed in their

folk tales.) *Arch. f. d. ges. Psychol.*, 1932, 86, 211-220.—Selected illustrations from the author's collection of tales show that the philosophical questions of freedom, compulsion and the origin of evil arise in the huts of the poor peasants of the Holy Land and are answered in the poetic style of the narrators.—J. J. Carlson (Aurora-on-Cayuga).

3207. Sigogneau, A. *Le tourment de Rodin*. (The torment of Rodin.) Paris: 1933. Pp. 242. 25 fr.—A discussion of certain psychological mechanisms influencing esthetic activity.—Math. H. Piéron (Sorbonne).

3208. Speck, F. *Ethical attributes of the Labrador Indians*. *Amer. Anthropol.*, 1933, 35, 559-594.—The Montagnais-Naskapi Indians of Labrador illustrate the cooperative primitive society so often sought by the social theorist. A long residence among them led the author to a high estimate of their social ethics. They avoid strife, violence and competition; are self-effacing, generous in respect to property, service and opinion, kind to women and children, and chaste and honest where contact with the whites has not corrupted them. These Indians have a high regard for human life, and are resigned in the presence of want and hardship. Revenge is rarely indulged in, and the chief punishment for misbehaving individuals is ostracism. They are lovers of solitude, though very hospitable to strangers. They are truthful among themselves and to strangers who do not try to exploit them. They are often intemperate and have been accused, probably on the basis of legends and sporadic cases, of cannibalism and abandonment of the aged. At present these customs do not exist. Their morality is a practical utilitarianism and adjustment of mutually dependent personal rights to group welfare. Their psychic dispositions may be rated as high as those of modern averages anywhere among Europeans.—C. M. Diserens (Cincinnati).

3209. Stracke, H. *Über die Beeinflussung durch Ausführung einer Nebentätigkeit neben dem Schreibakt*. (The influence of an accompanying activity upon handwriting.) *Arch. f. d. ges. Psychol.*, 1933, 89, 109-138.—Since graphologists assume a definite relationship between the personality of an individual and his handwriting, this investigation was carried out for the purpose of determining in what way and how much the normal handwriting of a person can be altered. 8 subjects were asked to write the same familiar material (1) under normal conditions; (2) simultaneously while carrying out other activities (mental calculation and tapping one of three keys in response to auditory stimuli); (3) at an increased rate of speed; and (4) a combination of (2) and (3). All of the factors studied resulted in definite changes in the handwriting of all subjects. A method is described for measuring the absolute speed of handwriting.—E. L. Kelly (Connecticut State College).

3210. Swenson, E., & West, M. P. *On the counting of new words in textbooks for teaching foreign languages*. *Bull. Dept. Educ. Res., Ontario Coll. Educ.*, 1934, No. 1. Pp. 40. \$0.50.—The authors present four scales, one for changes of meaning, one

for idioms, one for cognates, and one for new compounds of known elements, for the four reasons we need to be able to count, namely: (1) in order to know the vocabulary-burden; (2) in order to indicate vocabulary achievement, and in order to indicate what effort of vocabulary-learning is necessary to achieve a certain result desired by the learner; (3) in order to distribute the vocabulary-burden; and (4) in order to measure progress. Degree of agreement between two judges using the same material from two foreign language textbooks varied from an r of .65 to one of .87.—R. H. Brown (Clark).

3211. Tani, S. *Hanzai shonen no kosei chosa*. (Individuality test of juvenile criminals.) *Oyo Shinri Kenkyu*, 1933, 1, 341-368.—The growing increase of the number of juvenile criminals necessitates a thoroughgoing study on interconnection between their hereditary constitution, the process of their psychophysical development, and their life conditions past and present. The understanding of their individuality and crime must be founded on these three points. The author characterizes the viewpoint as "a doctrine of correlation of three aspects."—R. Kuroda (Keijo).

3212. Tinker, M. A. *Experimental study of reading*. *Psychol. Bull.*, 1934, 31, 98-110.—55 titles are reviewed under the heads: legibility of print, visual apprehension, and perception and eye movements in reading.—J. F. Dashiell (North Carolina).

3213. Tinker, M. A. *The role of eye movements in diagnostic and remedial reading*. *School & Soc.*, 1934, 39, 147-148.—There is no evidence that training or "pacing" of eye movements, as such, "develops effective motor habits which improve reading ability." On the other hand, "there are data from many sources which indicate that the nature of the oculomotor performance in reading is largely determined by central processes of perception and apprehension." "Eye movement patterns do not cause but merely reflect efficient or poor performance."—H. L. Koch (Chicago).

3214. Tinker, M. A., & Frandsen, A. *Photographic measures of reading performance*. *Psychol. Bull.*, 1933, 30, 669.—Abstract.—J. F. Dashiell (North Carolina).

3215. [Various]. *Minimum standards of training in research techniques*. *Sociol. & Soc. Res.*, 1934, 18, 203-222.—Papers by Harper, E. B., Reckless, W. C., Smith, M., Stephan, F. F., and Stouffer, S. A. were presented at the annual institute of the Society for Social Research.—J. R. Hilgard (Stanford).

3216. Weinell, H. *Die Nächstenliebe*. (Charity.) *Arch. f. d. ges. Psychol.*, 1932, 86, 247-260.—With reference to Kant, Wundt, Hartmann, Luther, Nietzsche and others, the author discusses the meaning of the Christian precept "love thy neighbor," with particular consideration of the range of application implied by the term "neighbor" (*nächsten*, next), and of the meaning of "love" itself. He concludes that Christian love consists not only in doing good to one's fellow men, but in helping them so that

they feel the force of love. It is a personal love and should exist not as a mere accident between two congenial persons but as the normal relationship between man and man.—*J. J. Carlson* (Aurora-on-Cayuga).

3217. Wentscher, E. *Allgemeine psychologische Grundlagen der Ethik*. (The general psychological basis of ethics.) *Arch. f. d. ges. Psychol.*, 1932, 86, 261-274.—By a detailed analysis of the voluntary processes the author shows how dependent is the goal which a person sets for himself on the individual's personality. By such an analysis of the will she believes the association psychology can be most effectively combated.—*J. J. Carlson* (Aurora-on-Cayuga).

3218. West, M. P., Swenson, E., & others. A critical examination of Basic English. *Bull. Dept. Educ. Res., Ontario Coll. Educ.*, 1934, No. 2. Pp. 53. \$0.50.—The authors present seven criticisms of Ogden's system of simplified English (Ogden, C. K., *Basic English*, Kegan Paul & Co., 1930) and list and discuss five essentials in the simplification of English learning for world use.—*R. H. Brown* (Clark).

3219. Yates, I. M. Concepts and attitudes concerning slander and freedom of speech. *Univ. Iowa Stud.: Stud. Educ.*, 1934, 9, No. 1, 185-206.—The chief purpose of the investigation was to determine to what extent boys and girls are now learning those concepts and attitudes toward slander and freedom of speech which are considered by society to be most desirable. 150 suits for slander were analyzed, and four questionnaires administered to more than 1000 pupils in grades 6, 9 and 12. Concerning a few of the important principles which underlie the problems of slander and freedom of speech the majority of pupils showed concepts in harmony with statutes and court decisions. In some questions there was gradual growth toward concepts acceptable in law; in others the change proceeded in the opposite direction. Much difference of opinion existed among students of education; on 45 out of 353 items, approximately 50% were on each side of the question.—*B. Wellman* (Iowa).

[See also abstracts 2891, 2922, 2941, 3084, 3093, 3098, 3099, 3106, 3112, 3114, 3129, 3131, 3268, 3307, 3314, 3321, 3322, 3325, 3329, 3336, 3338, 3344, 3346, 3353.]

INDUSTRIAL AND PERSONNEL PROBLEMS

3220. [Anon.] The selection of salesmen. *Human Factor*, 1932, 6, 26-29.—This article describes the methods used and advocated by the London Institute of Industrial Psychology in the selection of salesmen. They consist essentially of a personal interview and a series of psychological tests.—(Courtesy *Année psychol.*)

3221. Bingham, W. V. Abilities and opportunities. *Occupations*, 1934, 12, No. 6, 6-17.—The writer points out that for purposes of training and education current information of occupational opportunities is vital. The trend of occupations in the United States in the years 1870-1930, with special reference to the period 1910-1930, is indicated by five figures. From

an analysis of the changes that have been taking place in the numbers engaged in different kinds of work, serving different functions, and on different occupational levels, Bingham believes that in the future there will be less demand for unskilled laborers and an increasing number of opportunities in professional, domestic and personal service. "The abilities most essential in these occupations of the future will be abilities in personal and social relations. The education of the future must provide, then, more specifically and usefully than heretofore, a kind of training to develop proficiency in the best ways of living and working together."—*R. H. Brown* (Clark).

3222. Bingham, W. V. The accident-prone driver. *Human Factor*, 1932, 6, 158-169.—By means of interviews and special tests, American transport companies have been able to trace the cause of accident proneness among vehicle drivers to some personal idiosyncrasy which, in many cases, can be remedied by training.—(Courtesy *Année psychol.*)

3223. Crawford, A. B. What about all these tests? *Occupations*, 1934, 12, No. 8, 13-18.—A discussion of personality, achievement, and aptitude tests, their general nature and value. It is emphasized "that sound tests do exist and furnish valuable evidence, not otherwise obtainable, for guidance, but that they must be used with discrimination and a meticulous scientific probity."—*R. H. Brown* (Clark).

3224. Diez-Gasca, M. Preselezione di personale alberghiero. (Preselection of hotel workers.) *Organizz. sci. del lav.*, 1933, 8, 355-363.—The author describes the examinations given to students in a course for vocational preparation of hotel personnel. The psychotechnical examinations were chosen with the end in view of determining aptitudes in the young people choosing this vocation: attention, memory (for names, numbers, and faces) and practical and theoretical ethics, suitable tests being used for the various aptitudes. The author emphasizes the usefulness of a preliminary selection of students before admission to the hotel school.—*R. Calabresi* (Rome).

3225. Filene, C. [Ed.] Careers for women: new ideas, new methods, new opportunities—to fit a new world. (Rev. ed.) Boston: Houghton, 1934. Pp. 633. \$3.00.—*R. R. Willoughby* (Clark).

3226. Gatti, E., & Ponzo, M. Sull' utilizzazione di un tornio d'officina ai fini di determinazioni psicotecniche. (On the utilization of a factory lathe for certain psychotechnical determinations.) *Organizz. sci. del lav.*, 1933, 8, 477-480.—The authors describe a simple piece of apparatus which they have applied to ordinary sliding-lathes in a factory school. The apparatus allows the application of light stimuli at regular intervals during the rotation of a cylinder covered with smoked paper. A moving point traces on the smoked paper a line of a helicoidal form which is interrupted only at the moment of reaction. In this way the authors have obtained graphically chronometric observations on serial reactions under conditions which are entirely compatible with the work in the factory, a condition which gives great psychotechnical value to the results.—*R. Calabresi* (Rome).

3227. Hall, O. M. How occupational trends are studied: a review and bibliography. *Occupations*, 1934, 12, No. 6, 27-42.—R. H. Brown (Clark).

3228. Hepner, H. W. *Human relations in changing industry*. New York: Prentice-Hall, 1934. Pp. 671. \$5.00.—R. R. Willoughby (Clark).

3229. Hoppock, R. Occupational ability patterns: some popular misconceptions. *Occupations*, 1934, 12, No. 8, 46-48.—The writer appraises critically three errors made by novices in applying the theory of occupational ability patterns to the construction of patterns for immediate use: (1) the assumption that, without adequate validation against a satisfactory criterion, an occupational ability pattern is better than the tests upon which it is based; (2) the assumption that the profile of an individual should follow the median scores of successful people as shown on the pattern if he is to enter the occupation and succeed in it; (3) the assumption of internal consistency of the pattern on the basis that the zigzags of the quartiles resemble those of the median.—R. H. Brown (Clark).

3230. Hull, C. L. Aptitude test batteries: procedures in their construction. *Occupations*, 1934, 12, No. 8, 65-69.—In the function of aptitude tests to aid the vocational counselor in the discovery of latent maximal potentialities, it has been found necessary in practically all cases to combine a number of tests. The procedure of constructing an aptitude test battery is discussed under the following headings: (1) the psychological analysis of the vocation, (2) the choice of a preliminary battery of tests, (3) the administration of the preliminary battery to a group of individuals whose actual abilities in the aptitude in question may be measured, (4) the determination of the actual aptitude of the individuals in the trial group, (5) the comparison of the test scores with the actual abilities of the subjects on the aptitude and the rejection of all tests thus found to be useless, (6) the combination of the tests found to be valuable into a battery which will yield a prognosis of the aptitude in individuals whose aptitude is not otherwise known, and (7) validation. The article closes in the hope that through substantial subsidy either from the government or some of the research foundations the ideal aptitude forecasting by test scores may soon be reached.—R. H. Brown (Clark).

3231. Katin, L. The worker's point of view. *Imagination and rationalization*. *Human Factor*, 1932, 6, 183-186.—The author, a former compositor, discusses the suppression of the worker's imagination in present-day industries through the demand for conformity in workmanship. The contention is made that full cooperation between employer and employee can be achieved only when the worker is given some outlet for his personality.—(Courtesy *Année psychol.*)

3232. Kitson, H. D. Aptitude testing: its contribution to vocational guidance. *Occupations*, 1934, 12, No. 8, 60-64.—A discussion of the following considerations that must be taken into account in judging the value of an aptitude test: necessity for

testing a test, difficulty of measuring occupational proficiency, establishing validity, reliability, and predictability. With reference to the last point it is observed that aptitude testing is more useful in vocational selection than in vocational guidance. The article concludes with two recommendations: (1) All experimentation should be left to well-trained psychologists. (2) Instead of spending their time devising new tests, psychologists would better test the tests already available and determine their vocational significance.—R. H. Brown (Clark).

3233. Kinberg, O. *Basic problems of criminology*. Copenhagen: Levin & Munksgaard, 1933. Pp. 400. Dan. cr. 20.—R. R. Willoughby (Clark).

3234. Koch, H. Untersuchungen über den individuellen Arbeitsrhythmus an Landarbeitern. (Investigation on individual work rhythms in agricultural workers.) *Psychotechn. Zsch.*, 1933, 8, 58-65.—This section, which is one of a group of studies on work rhythms of agricultural workers, contains the results of a study of the effects of different types of hay wagons on the work rhythm curve. In addition, other experiments were performed with threshing and cutting the leafy tops from sugar beets. All these tests substantiate the author's former findings, namely, that different types of work produce different work rhythms, and that individual differences in rhythms exist, and in a general way, remain constant in spite of all the variations which result from external causes.—C. Burri (Chicago).

3235. Lloyd-Jones, E. *Personnel administration*. *J. Higher Educ.*, 1934, 5, 141-148.—The author describes what student-personnel administration is and shows its relation to general administration and to other personnel services.—R. R. Willoughby (Clark).

3236. Macrae, A. A second follow-up of vocationally advised cases. *Human Factor*, 1932, 6, 42-52.—The author reports the results of a follow-up study on nearly 200 children who had previously received vocational guidance at the London Institute. Excluding the doubtful cases, and considering as successful predictions those who succeeded when they adopted the Institute's advice and those who failed when they rejected it, there were nearly 79% of successful predictions.—(Courtesy *Année psychol.*)

3237. Masobello, G. Saggio di esame psicotecnico selettivo di un gruppo di allievi sorveglianti di miniera. (A selective psychotechnical examination for apprentice supervisors of mines.) *Organizz. sci. del. lav.*, 1933, 8, 414-418.—The test is composed of two parts. A first elimination of applicants is based upon replies to a questionnaire, standing on a general intelligence test, and the examiner's information and judgment. The second part of the examination concerns the concentration and distribution of attention, the speed of decision, the capacity for observation, the resistance to suggestion, and judgments of time and space, among others.—R. Calabresi (Rome).

3238. Mitchell, J. H. The personal element in the British coal industry. *Human Factor*, 1932, 6, 321-331.—The author discusses the main causes of lack of

cooperation between mine owners and workmen in the British coal industry.—(Courtesy *Année psychol.*)

3239. **Monro, M. S., & Raphael, W. S.** The value of a short test for the selection of workers. *Human Factor*, 1932, 6, 244-246.—A report of the results obtained from the application of a short simple test for the selection of workers to 120 sales girls of whom 60 had been rated as "good" and 60 as "fairly good" by their managers. The average score of the "good" girls was 8.07 and that of the "fairly good" ones was 5.05, the difference being 3.02, with a p.e. of .05. The test, which takes 10 minutes to apply and 30 seconds to score, is designed to test intelligence, arithmetical accuracy, attention to instructions, and tact.—(Courtesy *Année psychol.*)

3240. **Nishizawa, R.** Mental tests applied to the selection of reporters. *Jap. J. Psychol.*, 1933, 8, 891-906.—The subjects were 58 soldiers. Some of them were already recognized as well-fitted reporters according to the selected method applied up to this time. In the first investigation seven tests were employed. They are: (1) a test of the direct memory of tones, (2) a test of the direct memory of figures, (3) a test of the writing speed, (4) a test of the direct memory of simple forms, (5) a test of the repeating of commands, (6) a displacement test, and (7) an addition test. Seven months later the second investigation was carried out. The following results may be mentioned: (1) If the problems of the test are selected according to the practical communicating work, time will be saved and the method will be simple without changing the result. (2) In general, the auditory test is more useful than the visual one. (3) In order to select persons superior in knowledge and technique, specific tests must be devised. (4) The results were treated scientifically, but it is thought possible to treat them in another way which will bring a favorable promise.—*R. Nishizawa.*

3241. **O'Rourke, L. J.** Scientific personnel selection in the United States Civil Service. *Occupations*, 1934, 12, No. 8, 29-39.—In a study designed to bring about closer cooperation between government, industries, and schools, O'Rourke presents industrial, government, and high school percentiles for the following tests suited for the selection of stenographers and typists: general test (judgment, vocabulary, reading, comprehension, spelling, and English usage), English usage, rough draft, stenography. The coefficient of correlation between general test scores and efficiency ratings of the 51 employes tested in one industry was .71. In another group of 80 it was .76.—*R. H. Brown (Clark).*

3242. **Raphael, W. S., & Roberts, G. H.** The selection of telephone operators. *Human Factor*, 1932, 6, 398-412.—A description of a series of tests being tried by the London Telephone Service for the selection of operators. In order to determine the diagnostic power of the tests, the results obtained from administrations to date will be compared with subsequent records of efficiency.—(Courtesy *Année psychol.*)

3243. **Rusu, L.** Principiile de baza ale psihologiei aplicate. (Basic principles of applied psychology.) Cluj: Societatea de Maine, 1929. Pp. 16. Lei 20.—A general introduction into the principles and problems of the applications of psychology to economic and social life. The main topics are the psychological examinations for drivers, railroad personnel, army; offices for vocational guidance and the scientific management of labor. In conclusion, the author thinks that the beginning which is already made in all these directions justifies an optimistic attitude toward future applications.—*N. Margineanu (Chicago).*

3244. **Rusu, L.** Problema orientarii profesionale. (The problem of vocational guidance.) Cluj: Lapkiado, 1929. Pp. 45. Lei 40.—After a general discussion of the problem of vocational guidance the author analyzes the work done by the vocational guidance offices of Berlin, Dresden, Hamburg-Altona, Bonn and Cologne, with special emphasis upon the psychological work of these offices. Some relevant data are given concerning the efficacy and practical value of the work done by these offices. The last chapter contains suggestions for the organization of similar offices in Rumania.—*N. Margineanu (Chicago).*

3245. **Sartorius, H.** Trainingsverfahren für Zeitnehmer beim Handzeitstudien. (Training exercises for timekeepers through reaction time studies.) *Psychotechn. Zsch.*, 1933, 8, 149-160.—By what method, if any, would it be possible to train people who have to measure time in experimental procedures or in work situations so that the least possible subjective errors of measurement would occur? One of the fundamental requirements of such a method of training is that it develop greater speed of reaction. In other words, we must find some means by which to shorten an individual's reaction times. The description of such a training procedure is to follow in a future article in this journal.—*C. Burri (Chicago).*

3246. **Schmidt, H. F.** Das Ranschburgphänomen als Fehlerquelle im Fabrik- und Bürobetriebe. (The Ranschburg phenomenon as a source of error in factory and office work.) *Psychotechn. Zsch.*, 1933, 8, 56-57.—An experiment performed in the office of a large industrial concern where the handling of orders requires using large series of numbers which have one or more identical digits showed that many of the errors in copying or recording these numbers may be attributed to the Ranschburg phenomenon. Of 111 errors which the author analyzed, 78 occurred in homogeneous numbers, while only 33 were found in heterogeneous ones. However, since errors also occur in heterogeneous numbers, factors other than the Ranschburg phenomenon must also be operating.—*C. Burri (Chicago).*

3247. **Strong, E. K., Jr.** The vocational interest test. *Occupations*, 1934, 12, No. 8, 49-56.—The nature of the Vocational Interest Test and the significance of a pattern of interests for vocational guidance are discussed briefly. The grouping of 28 occupations into five main groups, two of which are subdivided, on the basis of the interests of the men

in the occupations is presented in a table and described. This grouping of occupations is valuable because, as far as interests go, a change from one group to another is very unusual, and, second, because with the use of the interest test it is possible to determine in which occupational group a man's interests fall, a determination which is usually sufficient for vocational guidance in high school and junior college. Although a person's interpretation of his interests in terms of vocational choice may change greatly, especially from 15 to 30 years of age, his interest pattern remains surprisingly stable, as shown by high correlations (from .643 to .906) of interest test ratings for one- and five-year periods. The vocational choices in 1932 of seven Stanford University seniors of the class of 1927 are interpreted with reference to their interest test ratings on 17 occupations in 1927.—*R. H. Brown* (Clark).

3248. **Trabue, M. R.** Graphic representation of measured characteristics of successful workers. *Occupations*, 1934, 12, No. 8, 40-45.—The advantages and dangers of graphic representation on a common scale of different test scores of an individual or of a given occupational group are briefly discussed and illustrated by two graphic profile charts.—*R. H. Brown* (Clark).

3249. **Warner, W. J.** A study of consumer preference. *Human Factor*, 1932, 6, 174-179.—A report of the results obtained in America from an investigation on consumer preference for varieties of small glass containers for caviar and herrings.—(Courtesy *Année psychol.*)

3250. **Watson, W. E.** The worker's point of view. *Hiring and firing*. *Human Factor*, 1932, 6, 423-427.—The author discusses the difficulties which arise through the power of foremen to make discharges, and urges that men should be dismissed only by the principals of the firm. He also suggests that present employees should be consulted with regard to the hiring of new workmen. Such policies would lead to a more cooperative spirit among the workmen, with a consequent increase in their productiveness.—(Courtesy *Année psychol.*)

[See also abstracts 2923, 2998, 2999, 3260, 3283, 3305.]

EDUCATIONAL PSYCHOLOGY

3251. **American Educational Research Association.** Methods and technics of educational research. *Rev. Educ. Res.*, 1934, 4. Pp. 119.—Descriptions of methods and technics used in various fields of educational research are given. Examples of research are used as illustrations. The fields covered, with the writer of each, are as follows: (1) research and various approaches to curriculum building, M. A. Norton; (2) technics of research used in the field of teacher personnel, E. W. Anderson; (3) methods of research in school organization, W. C. Reavis; (4) special methods in the elementary school—problems and methods of research, F. S. Breed; (5) controlled experimentation as a means of evaluating methods of

teaching, W. S. Monroe; (6) methods of research in school finance, W. G. Reeder; (7) technics used in school building surveys, T. C. Holy; (8) research through educational tests, J. L. Stenquist and A. M. Broening; (9) methods of research in child psychology, G. D. Stoddard and B. L. Wellman; (10) methods of research in pupil personnel, guidance and counseling, A. O. Heck; (11) methods and materials of legal research, N. Edwards; (12) library methods in educational research, C. Alexander; (13) the place of the laboratory experiment in educational research, F. N. Freeman. A bibliography for each section is included.—*S. M. Stoke* (Mount Holyoke).

3252. **Ayers, G. H.** Predicting success in algebra. *School & Soc.*, 1934, 39, 17-18.—All pupils (240) who completed the exploratory course in mathematics in the eighth year at the South Pasadena Junior High School and who subsequently completed a year's course in algebra at the same school during the years 1930-1933 were the subjects in the investigation. The prognostic indexes studied were the South Pasadena Prognostic Test in Algebra, the 8A Mechanics Test, the 8A Reasoning Test, teachers' estimates of mathematical ability, and IQ as determined by the Terman Group Test. The criterion of ability in algebra was the second-semester grade in the subject. The correlations of the criterion with the various prognostic indexes are in the order of their listing above + .400, + .375, + .439, + .634, and + .337. The best combination of the indexes proved to be the South Pasadena Prognostic Test, 8A Reasoning Test, and the teachers' estimates of mathematical ability.—*H. L. Koch* (Chicago).

3253. **Betts, G. H.** A rating scale for character emphasis in a school system. *Educ. Trends*, 1934, 3, 34-36.—The author suggests certain foundation principles from which to proceed in the construction of a rating scale for character emphasis in the school.—*H. W. Karn* (Clark).

3254. **Boardman, R. K.** The transition from home to school. *J. Educ. Sociol.*, 1934, 7, 371-378.—There are many problems involved for both child and teacher in the transition from home to school. "Essentially, they all fall into two groups: first, those problems arising out of the necessity of adjusting to new standards and requirements of behavior; and, second, those arising out of the necessity of entering into new personal and social relationships. If school and teacher do not understand the child's background of family and community experience, conflict is the inevitable result of the attempt to impose upon him new standards of behavior. If school and teacher, again, fail to estimate accurately the child's independence and adaptability, insecurity is the inevitable result of the many new personal and social relationships in which he finds himself involved."—*F. D. McTeer* (Wayne University, Detroit).

3255. **Brink, W. G.** Integration of theory and practice in the professional education of teachers: an experimental study. *Educ. Trends*, 1934, 3, 21-27.—A report of experimental findings which indicate that achievement in methods of teaching is favorably

influenced by integrating theoretical work with actual teaching opportunities.—H. W. Karn (Clark).

3256. Dewey, J. The supreme intellectual obligation. *Science*, 1934, 79, 240-243.—In giving suggestions to be carried out in the field of education with the aim of extending the "applications of knowledge and intelligence," the author stresses the importance of cultivating those attitudes of "open-mindedness, intellectual integrity, observation and interest in testing . . . opinions and beliefs that are characteristic of the scientific attitude."—M. G. Willoughby (Clark).

3257. Dewey, J. C. A technique for investigating reading comprehension. *School & Soc.*, 1934, 39, 276.—The author, mistrustful of most of the current methods of testing reading comprehension, suggests as a more satisfactory one the oral interview method. The student whose comprehension is being tested is questioned by the operator. The vocal responses of both the examiner and examinee are recorded by means of a radio-microphone-dictaphone arrangement, placed so that the latter will be unaware of its presence.—H. L. Koch (Chicago).

3258. Distad, H. W. An analysis of the drill provisions in division of decimals in ten arithmetic series. *J. Educ. Res.*, 1934, 27, 509-523.—Study of 10 texts published between 1925-1930.—S. W. Fernberger (Pennsylvania).

3259. Douglass, H. R., & Tallmadge, M. How university students prepare for new types of examinations. *School & Soc.*, 1934, 39, 318-320.—About 300 juniors in the College of Education at the University of Minnesota checked a questionnaire concerning the ways in which they tended to study for objective and subjective type examinations. The methods reported as most commonly employed in the preparation for subjective type examinations were: (1) to "read and review generalities and trends," (2) "to attempt to draw several important conclusions from tables," (3) "to formulate personal opinions regarding materials involved," and (4) "to read notes on the text and lectures carefully"; those methods asserted to be most frequently used in the preparation for the objective type quizzes were: (1) "to learn tables and minute details of the material covered," and (2) "to try to remember the words of the book on numerous points." For both varieties of examination about half of the students declared they tried to "learn groups of facts in logical summary."—H. L. Koch (Chicago).

3260. Earle, F. M. The psychological examination: its place in vocational guidance. *Occupations*, 1934, 12, No. 8, 70-74.—The writer argues that vocational guidance should be based upon the psychological examination rather than upon tests, because tests "have not yet reached such a pitch of validity and reliability as to supplant other sources of information" and because the most essential element in any advising procedure is the personal contact between the counselor and the counseled ("Remove the psychology from the psychological test and what have you left?"). There follows a brief description of two investigations (Earle, F. M., and others, *Methods of*

Choosing a Career, London, Harrap & Co., 1931; and Allen, E. P. and Smith, P., *The Value of Vocational Tests as Aids to Choice of Employment*, Birmingham, Educ. Committee, 1932) in which the "final recommendations as to the choice of an occupation were the outcome of a survey of the child's general physical, mental, and temperamental condition as determined by his school marks, by performances in special tests, and by oral interviews."—R. H. Brown (Clark).

3261. Fagerstrom, W. H. Mathematical facts and processes prerequisite to the study of the calculus. *Teach. Coll. Contrib. Educ.*, 1933, No. 572. Pp. vii + 68.—The 2,811 problems from Granville's *Calculus* were analyzed for facts, principles, formulas, and processes involved in their solution. The findings of the analysis were compared with the requirements in secondary mathematics as set forth in the syllabus of the College Entrance Examination Board in order to determine how much of the required subject matter of secondary mathematics was actually used in the solution of the calculus problem. The total frequency of facts, etc., used to solve the problems was 29,971, or 10.6 per problem. "Of the 276 different facts and processes used in this study, 129 were classed as algebraic, 43 as geometric, 37 as trigonometric, and 67 as from the field of analytic geometry."—J. M. Stalnaker (Chicago).

3262. Fitzgerald, J. A. Letters written outside the school by children of the fourth, fifth, and sixth grades: a study of vocabulary, spelling errors, and situations. *Univ. Iowa Stud.: Stud. Educ.*, 1934, 9, No. 1, 9-50.—More than 4000 personal letters written by children in grades four to six were examined for vocabulary, spelling and situations in which written.—B. Wellman (Iowa).

3263. Frederick, R. W., & Bookheim, A. A study of the effects of concentrated and scattered professional training on success in teaching. *School & Soc.*, 1933, 38, 683-684.—The authors compare the grades made in practice teaching by 50 undergraduate students whose courses in education were taken during the 7 semesters preceding their practice work with the grades made by 50 graduate students whose professional preparation was crowded into the one semester of their first year of graduate study, which immediately preceded that in which they received their student teaching experience. The two groups were practically equal with respect to their success in practice teaching. It is concluded that nothing seems to be gained by spreading professional training over a period of years.—H. L. Koch (Chicago).

3264. Henmon, V. A. C. The function, value, and future of educational research in colleges and universities. *J. Educ. Res.*, 1934, 27, 493-502.—During the last decade educational research has shifted from the field of the elementary school to that of higher education. Personnel research makes up a large part of this newer work. Another important new field is that of the development of objective comparable tests. In this connection the author emphasizes the great complexity of problems of aims, cur-

ricula and methods of the institutions of higher education.—S. W. Fernberger (Pennsylvania).

3265. Hicks, F. R. *The mental health of teachers.* *Peabody Contrib. Educ.*, 1934, No. 123. Pp. ix + 36. \$1.25.—Responses by 600 teachers from various sections of this country to 62 questions patterned after the inventories by Woodworth, Laird, and the Thurstones were analyzed. The scores of 76 students in Peabody who had been teachers yielded a correlation coefficient of $.918 \pm .012$ between the improvised questionnaire and the Woodworth-Mathews personal data sheet. Of the 600 teachers, 43.7% were found to be "unusually stable," 38.8% intermediate, and 17.5% "unusually nervous." In this last class were found 20% of the women and 8% of the men. Twice as large a percentage of the women (14%) as of the men had suffered a "nervous collapse." In the stable group only 18.7% had no hobby, while 39.1% of the nervous had none. Lack of exercise was evident in over half of the 600 teachers. Influenza, colds, tonsillitis, pneumonia, sinus trouble, and other disturbances resulting from colds caused the greatest number of the absences of these teachers. Indigestion and nervousness ranked second and third as causes. Absences, however, did not correlate appreciably with nervousness.—J. Peterson (Peabody).

3266. Hill, G. E. *The report card in present practice.* *Educ. Trends*, 1934, 3, 6-14.—In order to determine present practices in reporting the author analyzed 443 school report forms. These cards came from practically every state in the union and represented cities and towns of all sizes. The report forms fell into 4 groups, 55 used in the kindergarten grades, 250 used in elementary schools, 58 used in junior high schools and 80 used in senior high schools. The analysis was concerned with 7 phases of reporting: (1) general form and organization of report forms, (2) the letter to the parents, (3) academic subjects and their rating, (4) rating character traits and conduct habits, (5) reporting attendance, (6) health ratings, (7) special features. In the next issue of *Educational Trends* the author will propose a set of report forms which will incorporate the best features of the cards analyzed in the present study.—H. W. Karn (Clark).

3267. Hoff, M. v. *Decroly's Pädagogik mit Berücksichtigung ihrer psychologischen Grundlagen.* (Decroly's pedagogy with particular attention to its psychological foundations.) Karlsruhe: Braun, 1932. Pp. 164. RM. 2.00.—R. R. Willoughby (Clark).

3268. Huguenin, E. J. (Mme.) *Education et culture d'après Kerschensteiner.* (Education and culture according to Kerschensteiner.) Paris: Flammarion, 1932. Pp. 281. 12 fr.—In the vehement discussions which have been waged around the question of education, the most authoritative voice has been that of G. Kerschensteiner, the Munich pedagogue. Kerschensteiner brings forward for the first time a complete solution of the problem of reform in education, a critical and profound examination of all the claims of the new pedagogy, and an experi-

mental investigation of the ideas which seem most fruitful and likely to continue. In Kerschensteiner we have, says the author, both the philosopher and the patrician in education. He has defined, through a profound study, the terms which have formerly been so poorly defined and which constitute the present-day vocabulary of the pedagogue. He has formulated the theory of the present-day school by demonstrating its psychological foundations. He was the first to use a classification of psychological types for the purpose of practical application. His work projects past the field of education to cover all culture, for which he brings us a new definition. In conclusion, the author gives a list of Kerschensteiner's pedagogical works. The first 46 pages give a history of the reform in German education following the life and work of Kerschensteiner.—Math. H. Piéron (Sorbonne).

3269. Huth, A. *Pädagogische Gegenwartsaufgaben.* (Pedagogical requirements of the present.) *Arch. f. d. ges. Psychol.*, 1932, 86, 149-158.—The state should guarantee to every child a certain measure of education, an education that is more than mere instruction, that seeks rather to inculcate an appreciation of cultural values particularly necessary in these times. Such an education, superseding intellectualism, should extend its scope beyond the school, to the youth outside its walls and to the masses of the people.—J. J. Carlson (Aurora-on-Cayuga).

3270. Jewett, I. A. *A decade of research in English in teachers colleges.* *Teach. Coll. Rec.*, 1934, 35, 460-472.—The studies reported have been classified under (1) teacher supply and demand (one study), (2) curriculum (20 studies), (3) classroom technique (16 studies), and (4) measurement (7 studies).—J. M. Stalnaker (Chicago).

3271. Kelley, V. H. *An experimental study of certain techniques for testing word meanings.* *Univ. Iowa Stud.: Stud. Educ.*, 1934, 9, No. 1, 53-94.—Five test techniques for measuring word-meaning knowledge were selected for study in regard to validity and reliability with more than 1100 fifth- and sixth-grade children. None of the five tests possessed sufficient validity to make it valuable as an instrument for measuring the word-meaning knowledge of individual children. Two tests, equally valid, gave a very definite estimate of the number of words known by a subject. The time limit was an important factor in determining the validity of a test.—B. Wellman (Iowa).

3272. MacPhail, A. H. *A comparative study of the quality of academic work done by fraternity and non-fraternity students at Brown University.* *School & Soc.*, 1933, 38, 873-876.—On the basis of the scholarship shown during the four consecutive years of their college course, 100 fraternity members were compared with 100 non-fraternity men, matched with them in respect to an index including rank in high school class and score on the Brown University Psychological Examination. The non-fraternity group made an average grade slightly, but not significantly, higher than did the fraternity men. The lowest quartile in both groups did about equally

well during their freshmen year; but the club members tended to decline in performance, whereas the non-club group tended to improve markedly. For the four-year period the men in the highest quartile of the two groups did not differ to any great degree.—*H. L. Koch* (Chicago).

3273. **Maney, C. A.** The distribution of memberships in the extra-curricular activities of the liberal arts college. *School & Soc.*, 1934, 39, 63-64.—The fraternity group at Transylvania College, it was discovered, had relatively many more memberships in organizations representing extra-curricular activities than did the non-fraternity group. The difference between the two groups was least in the case of the cultural and religious or ethical organizations and greatest in the social and political. The members of the fraternities and sororities tended not to rank so well in scholarship as did those who were not members.—*H. L. Koch* (Chicago).

3274. **McKee, J. H.** Subjective and (or versus) objective. *English J.*, 1934, 23, 127-133.—The writer offers evidence, based upon experiments with college freshmen, to show that objective tests in English offer a better basis for prediction and the sectioning of English classes than does a subjectively scored theme.—*S. M. Stoke* (Mount Holyoke).

3275. **Meredith, L. A.** Teachers' personalities and the problems of children. *J. Educ. Sociol.*, 1934, 7, 387-396.—The personality of the teacher is undoubtedly one of the major factors in the pupil-teacher relationship. The teacher makes this relationship more difficult when she reacts toward the child in a way determined by her own unhappy experiences, her feelings of professional insecurity, or her intolerance of social variation.—*F. D. McTeer* (Wayne University, Detroit).

3276. **Muchow, M.** Zwei Fälle von Rechtschreibungsschwierigkeiten. (Two cases of difficulty in orthography.) *Zsch. f. päd. Psychol.*, 1932, 33, 18-25.—By means of various tests and extended observations the author was able to determine the causes of deficiencies in ability to learn orthography in the case of two young girls. One case consisted of difficulty in articulation; the other involved difficulties in the perception of form. Methods of reeducation were subsequently devised.—(Courtesy *Année psychol.*)

3277. **Perry, R. D.** Prediction equations for success in college mathematics. *Peabody Contrib. Educ.*, 1934, No. 122. Pp. xiii + 58. \$1.25.—In this study the multiple-regression-equation technique and data from the files of Purdue University were employed to investigate the possibilities of predicting success in college mathematics. It was found that on the basis of scores on the American Council intelligence tests, the Iowa Mathematics Training Test, the Iowa Chemistry Aptitude Test, and the Purdue Placement Test in English clear and reliable differences were made between pairs of scholastic groups of students as follows: honor, normal, withdrawn, and probation, except that the difference between the last two groups of students was not reliable. The tests ranked in effectiveness in the order: intelligence,

English, chemistry, mathematics. On 400 freshmen selected at random from the class of 1929 and followed through four semesters of mathematics grades, it was found that for effectiveness in predicting success in mathematical work the five tests here used ranked in the order: mathematics, chemistry, Purdue Personality Rating Scale, intelligence, English. Students who failed in mathematics after the freshman year failed for reasons other than lack of ability in mathematics. The author recommends departmental tests for prediction in special lines of work.—*J. Peterson* (Peabody).

3278. **Powell, R. L.** Valid testing and diagnosis in the mechanics of ninth grade English composition. *Univ. Iowa Stud.: Stud. Educ.*, 1934, 9, No. 1, 97-130.—The validity of three procedures for measuring ability in certain elements of English mechanics was studied. Nine themes written by each of 302 ninth-grade pupils were examined for error count and error quotient. At the close of the theme-writing period the pupils were given a long proof-reading type of test. There was a high correlation between error count and error quotient, but only a low correlation between error count and proof reading. The study points out some of the weak and strong features of each of the three measures.—*B. Wellman* (Iowa).

3279. **Rivlin, H. N.** English grammar as preparation for the study of modern foreign languages. *English J.*, 1934, 23, 202-207.—A study of the attitudes of English, French, German and Spanish teachers toward a list of 187 items of grammar shows that the English teachers consider grammar more important than do the foreign language teachers. A list of the ratings, in order of importance, for the various items is given by teacher groups. It is suggested that the agreements shown offer a partial basis for curriculum construction with respect to grammar.—*S. M. Stoke* (Mount Holyoke).

3280. **Rogers, K. H.** A relationship between "perseveration" and school achievement. *Psychol. Bull.*, 1933, 30, 663-664.—Abstract.—*J. F. Dashiell* (North Carolina).

3281. **Rupp, H.** Zur Berufsberatung von Abiturienten. (Vocational guidance for the college graduate.) *Psychotechn. Zsch.*, 1933, 8, 43-56.—This is the second of a series of articles in which the author reports his views on methods of vocational guidance for college graduates. This part contains a description of a series of group examinations in which the necessary information for a successful analysis of aptitudes, interests and abilities is collected. This examination consists of a series of tests and questionnaires. The latter concern the subject's economic condition, his professional training and interests, his personal peculiarities, and his habits. The test battery is made up of an intelligence test, some technical problems, and some memory tests, tests of attention, tests of alertness, tests on mechanical drawing or designing, and finally some tests on general concepts and practices of law.—*C. Burri* (Chicago).

3282. **Segel, D.** Differential prediction of scholastic success. *School & Soc.*, 1934, 39, 91-96.—The

study shows the relationship (a considerable one) existing between vocational interest scores (Strong Interest Blank) and differences between marks in college subject groups, as well as differences between achievement test results (Iowa High School Content Examination). The subjects of the study were 100 junior college boys who had finished one year of college work. Special formulae were developed to reveal the associations which the author reports. The study also shows that the differential relationships may be stronger than the direct. The author claims his method is more accurate than any now existing in giving information upon which a decision may be made regarding the relative possibilities of success in different scholastic subjects, curricula, or occupations.—H. L. Koch (Chicago).

3283. Sparling, E. J. Do college students choose vocations wisely? *Teach. Coll. Contrib. Educ.*, 1933, No. 561. Pp. v + 110.—888 Long Island University students who have chosen a vocation and 123 students who have not were the subjects. A vocational fitness scale is developed which consists of 4 parts: (1) intelligence, 10%, (2) educational achievement, 20%, (3) economic, social, and educational background, 55%, and (4) vocational expectation, 15%; it was applied to the subjects. Data were obtained chiefly from questionnaires, personnel records, and academic records. The group is not typical in vocational choices of college students in general. 91% of the students have foreign-born parents; 95% of the students intend to go into teaching, medicine, law or dentistry (3% of the parents are in such occupations). The men believe that they will earn four times as much as the average worker in the vocation actually earns. In spite of religious and racial prejudice which will be used against them, and in spite of social, economic, and cultural handicaps which they have, "70% are endeavoring to gain entrance to three of the most overcrowded vocations in the United States," and 95% to the four most overcrowded vocations in metropolitan areas. The need for vocational guidance is pointed out. The questionnaires used are given; the bibliography contains 108 references.—J. M. Stalnaker (Chicago).

3284. Starrak, J. A. Student rating of instruction. *J. Higher Educ.*, 1934, 5, 88-90.—Eleven essentials of teaching (preparation for class meetings, interest and enthusiasm in his subject, ability to arouse interest in students, organization of course, scholarship, ability to express thought, enunciation, thinking demanded of students, assignments, leading discussion and questioning, and sense of proportion) and six personality traits (feeling between instructor and students, sense of humor, self-confidence, tolerance and liberality, personal appearance, and personal peculiarities) have been used in a rating scale at Iowa State College since 1928. Over 40,000 scales have been used. The ratings have been of great value to the individual teachers and departments. The validity of the scale is not easily demonstrated. Some problems are discussed.—R. A. Brotemarkle (Pennsylvania).

3285. Stewart, M. A scale for measuring the quality of conventional news stories in high school journalism. *English J.*, 1934, 23, 209-215.—Six samples of conventional news stories chosen from the work of high and elementary school pupils form the basis of this scale. A description of the method used in scaling is given. The author states that three-fourths of the articles in high school journals can be judged by this scale.—S. M. Stoke (Mount Holyoke).

3286. Stratton, D. C. Problems of students in a graduate school of education. *Teach. Coll. Contrib. Educ.*, 1933, No. 550. Pp. x + 168.—A questionnaire dealing with personal and academic problems of students was sent to 3,055 Teachers College students, 1000 of whom replied. Thirty-minute interviews were held with 215 of the students who returned the questionnaire, and time-schedules were obtained from 145 of the students interviewed, covering one-week periods. Three-fourths of the group studied were graduate students. "The study shows that the graduate students studied, as well as the undergraduates, have a wide range of unsolved problems, both personal and academic, that they consult college officials with regard to all types of problems, and that they find over three-fourths of their conferences helpful in the solution of their problems." The "Student Inquiry Blank," an outline of the student interview, the interview card used by personnel officers and professors, and a typical daily time schedule are given in the appendices. The bibliography lists 27 titles.—J. M. Stalnaker (Chicago).

3287. Symonds, P. M. Common faults in graduate research in education. *J. Educ. Res.*, 1934, 27, 481-492.—The author points out that there has been poor correlation of the gathering of facts and their application to an educational program, that the background of the graduate student is often meager and shallow, that certain tacitly accepted fundamental assumptions may frequently give a study a bias, that the choice of methods and instruments of investigation are often faulty, and that a number of technical faults are commonly seen in the statistical methods employed.—S. W. Fernberger (Pennsylvania).

3288. Tallmadge, M., & Douglass, H. R. What college students believe they think about certain types of examinations. *School & Soc.*, 1934, 39, 349-352.—The study concerns the responses of 300 students in the College of Education at the University of Minnesota to a questionnaire regarding their opinions with respect to various features of college examination systems. The students tended to prefer the objective to the subjective type of examination. Especially was this true in the case of history, English, education, mathematics, chemistry, home economics, and accounting. In the case of music, art, and physical education the preferences of the group seemed about equally divided. Individuals were inclined to be somewhat more favorable to the subjective examination than generally for the fields in which they were majoring. The students tended to approve strongly the objective examination for large classes, but to show no decided preference trends with respect to

the small classes. Of the fourth of the group who had taken examinations of the type prepared outside of the class room, two thirds approved. For the "informational," "mental skill," and "laboratory" varieties of courses, weekly quizzes were most often favored, whereas for courses in the special "motor skills" the scheme of semi-quarterly examinations received most frequent sanction. A pass or fail type of marking most students thought desirable, but not likely to raise standards.—*H. L. Koch* (Chicago).

3289. Tesar, L. E. *Berufsberatung von Maturanten*. (Vocational guidance for the college graduate.) *Psychotechn. Zsch.*, 1933, 8, 37-42.—Vocational guidance should be much more inclusive than is usually the case. Along with the customary things it should also take into consideration a person's *Einstellung* (adjustment) toward life and the world, toward his family and mate. In short, vocational guidance must become life guidance. But it must also have a practical side. It must secure information about the requirements and possibilities of different vocations. It should furnish the student who is about to enter a new vocation concrete facts and data about that vocation, the demands which it makes upon him, and the opportunity it offers.—*C. Burri* (Chicago).

3290. Thisted, M. N. Participation in college athletics and vocational success. *Univ. Iowa Stud.; Stud. Educ.*, 1934, 9, No. 1, 133-149.—On the basis of replies of 500 alumni to a questionnaire and attitude scale, the author concluded that students participating in intercollegiate athletics show no evidence of having been handicapped either in college or in later life by this participation. The athletes were as successful as non-athletes in their vocations. They believed that college athletics had been of personal value.—*B. Wellman* (Iowa).

3291. Toops, H. A. Tests and techniques in a state-wide minimal guidance program. *Occupations*, 1934, 12, No. 8, 19-28.—A general discussion of the need for a change in the present aims, curricula, teaching methods, and teaching equipment of our high schools and colleges, of the five objectives in the minimal guidance program proposed for the Ohio high schools by the Ohio College Association, and of the guidance program which has been carried out so far.—*R. H. Brown* (Clark).

3292. Tormey, T. J. The effect of drill upon the specific and the general comprehension of historical content. *Univ. Iowa Stud.; Stud. Educ.*, 1934, 9, No. 1, 153-182.—Two experiments were conducted under classroom conditions to evaluate the effect of drill upon comprehension of history content. 364 pupils participated. The drill groups received drill on geographic words, collocations, and key words. The control groups received regular classroom instruction. Drill was found to be helpful in comprehension of history content.—*B. Wellman* (Iowa).

3293. Trolan, H. The activity program in the Newark schools from a mental hygiene point of view. *J. Educ. Sociol.*, 1934, 7, 379-386.—In the first two grades of the elementary school the use of group

projects, with each pupil responsible for his own unit project, has made it possible for the teacher to devote more attention to understanding the child's individual problems, to guiding his early school adjustments, and by suiting his task to his abilities, to giving him a feeling of self-confidence and security.—*F. D. McTeer* (Wayne University, Detroit).

3294. Trow, W. C. [Ed.] *Character education in Soviet Russia*. (Trans. by P. A. Kalachov.) Ann Arbor, Mich.: Ann Arbor Press, 1934. Pp. 199. \$1.25.—A translation of selections from a series which makes up the course of training for leaders of the Young Pioneer divisions in the U. S. S. R. In the introductory chapter Trow states that the purposes of this organization (which is composed of children from 10 to 15 years of age) are: (1) to make citizens loyal to the principles of socialism, (2) to encourage growth in social knowledge and participation vicariously in the economic construction of the country, and (3) to afford cultural and recreational opportunities. A few abstracts from the handbook are as follows: "Whom shall we educate? Briefly, we shall educate Communists; but what does this mean? . . . To train up a Communist means to train up a collectivist, an internationalist, and a militant atheist." "Any question of the relationship of comrades to each other should be tied up with collectivism; the children should be shown the roots of egotism, individualism, and private property, the evils against which we are contending, so that they may see how a person who is not on good terms with his class comrades is virtually supporting the class enemies." The Pioneer motto is: "For the struggle for the workers' cause, be ready. Always ready."—*V. Jones* (Clark).

3295. Vidari, G. *Psicologia e pedagogia*. (Psychology and pedagogy.) *Scritti onore Kiesow*, 1933, 164-168.—Psychology gives us a scientific knowledge of man and a technique for studying him. Pedagogy is a psychological technique in the field of education. Positive psychology does not give us an integral concept of man; it is quite insufficient to clarify our ideas on the fundamental problems of the relation between the forms and categories of psychic facts or of the freedom of the self. These problems must be resolved by philosophical methods, with consideration given to the facts of psychology.—*R. Calabresi* (Rome).

3296. Weidemann, C. C., & Newens, L. F. Does the "compare-and-contrast" essay test measure the same mental functions as the true-false test? *J. Gen. Psychol.*, 1933, 9, 430-449.—This question was studied under typical college class-room conditions, and the data were subjected to an extensive statistical treatment. It was found that improved compare-and-contrast essay tests and improved true-false tests measure mental functions that are identical only to the extent of about 60%. The consistency of the two kinds of tests was approximately the same.—*H. Cason* (Wisconsin).

3297. Wheeler, R. H. The crisis in education. *School & Soc.*, 1933, 38, 756-759.—The author directs

an attack against the mechanistic conception of nature, learning, and education. Better integration or greater unity of knowledge, more social insight, less competition, and more emphasis on the problem of goals are desiderata.—H. L. Koch (Chicago).

3298. Williamson, E. G. Mental abilities related to learning to spell. *Psychol. Bull.*, 1933, 30, 743-751.—39 titles are reviewed with reference to those factors making for good and poor spelling. These are: span of apprehension, knowledge of meanings, verbal intelligence, perception of word-form, generalization of phonetic units, rote memorizing, and desire to spell.—J. F. Dashiell (North Carolina).

3299. Williamson, E. G., & Paterson, D. G. Coordinating counseling procedures. *J. Higher Educ.*, 1934, 5, 75-78.—The faculty-student contact desk at Minnesota serves as a central agency for getting information into the hands of counselors. All "out-of-routine" contacts are reported to this central agency and such cumulative information is available for all personnel work with the individual student. It can be secured, upon request, by any administrative or faculty counselor. An analysis of 3,970 problems discovered and discussed by 287 faculty members in one week is reported. Certain values of the plan are suggested.—R. A. Brotemarkle (Pennsylvania).

3300. Wilson, G. M. For 100 percent subtraction, what method? A new approach. *J. Educ. Res.*, 1934, 27, 503-508.—Subtraction should not be difficult, because there are only 100 facts to be learned and these are not difficult facts. Still, many methods are used for teaching these facts. The author presents the results of a questionnaire sent to 400 school systems, normal schools, etc. The results indicate that a number of methods are employed, but that the "take-away, borrowing, upward" method was employed by nearly 50% of the individuals replying.—S. W. Fernberger (Pennsylvania).

3301. Wood, B. D., & Beers, F. S. The major strategy of guidance. *Occupations*, 1934, 12, No. 8, 8-12.—Guidance along educational lines is seriously hampered by rigid curricula and cannot realize its full potentialities unless the guidance and measurement movements serve to emphasize the need for teachers to study their pupils as individuals. The individual case study is a step in this direction.—R. H. Brown (Clark).

3302. Woodring, M. N., & Metcalfe, Z. F. The use of the interview in the improvement of study. *Teach. Coll. Rec.*, 1934, 35, 480-492.—A discussion giving suggestions concerning how to interview. An annotated bibliography lists 10 titles.—J. M. Stalnaker (Chicago).

3303. Zapan, G. Beziehungen zwischen den Unterrichtsfächern in den höheren Schulen und Folgerung für die Schulorganisation. (The intercorrelation of subjects in advanced schools and its effect on school organization.) *Psychotechn. Zsch.*, 1933, 8, 102-111.—What is the relationship between different school subjects? Do some subjects show

greater relationship than others, or are they all related in about the same degree? In order to answer these questions, the author required every teacher of a Rumanian gymnasium to rate his pupils in terms of their ability in a given subject and whether or not he would recommend a given pupil for the study of a particular subject. The intercorrelations indicate a multiple-factor pattern. Some subjects give a higher correlation than others, and the subjects of a given group intercorrelate more highly with those subjects within that group than with any one of another group. Five such groups have been established. In the first one are mathematics, physics, and chemistry; in the second, history, history of religion, geography, and natural history; in the third, modern and ancient languages; in the fourth, theology and philology; and in the fifth, music, drawing and gymnastics. History gave the smallest intercorrelations. The intercorrelations between groups vary from grade to grade, those from the lower grades being the highest. They decreased from year to year. According to these results it seems that in the lower grades a student's ability is fairly homogeneous; gradually it differentiates itself more and more as the student advances in years.—C. Burri (Chicago).

[See also abstracts 3152, 3154, 3213, 3223, 3230, 3232, 3247, 3305, 3306, 3318, 3325, 3347, 3348, 3355.]

BIOMETRY AND STATISTICS

3304. Remmers, H. H. A possible experimental error in determining the overlap of two correlated variables. *J. Gen. Psychol.*, 1933, 9, 459-461.—The author calls attention to a systematic experimental error in certain aspects of the procedure used in correcting for attenuation, particularly with reference to measuring the overlap of mental functions, and he discusses the methods of determining the reliability or self-correlation of a measure.—H. Cason (Wisconsin).

[See also abstracts 3011, 3124.]

MENTAL TESTS

3305. Alexander, W. P. Research in guidance. *Occupations*, 1934, 12, No. 8, 75-91.—Since guidance is dependent for its success on three interdependent fields of investigation, individual analysis, occupational analysis, and guidance techniques, the writer strongly urges that the same set of terms be used in each field, that research work in different fields be integrated. After a consideration of the present basis for guidance, or the set of terms which are to be used, in which the views of Spearman, Thorndike, Hull, Kelley, and Thurstone are discussed, he outlines a theory such that the differences in the existing theories are resolved, and such that the essential truths contained in all of them are found in it. This theory is hierarchic in the sense that "it has one general factor and moves from there through an increasing number of factors of less breadth to the large number of specifics of special interest in one reaction only." Suggestions relative to future research are as follows:

(1) Successful future research must be integrated by some central body. (2) One research must be conducted to take in the whole field of abilities and personality at one time. (3) Tests must be validated in terms of the factors resolved by (2) so that we have measure of single entities. (4) The same terms must be used in occupational research as are being used in individual research.—*R. H. Brown* (Clark).

3306. **Broom, M. E., & De Silva, F. W.** Achievement test scores as measures of the mental ability of junior high school pupils. *School & Soc.*, 1933, 38, 715-716.—The authors, after reviewing the works of others and some studies in which they have had a direct part, conclude that the scores on mental tests and batteries of school achievement tests correlate with each other in the case of the junior high school group as high as do mental ages yielded by two different intelligence tests. It is believed, therefore, that school achievement tests may be used for the purpose of student classification, mental tests of the caliber of those available being generally unnecessary.—*H. L. Koch* (Chicago).

3307. **Knight, M. W.** A comparative study of the performance of feeble-minded and juvenile delinquents on the Arthur performance scale and the Stanford-Binet test of intelligence. *J. Juv. Res.*, 1934, 18, 5-12.—The author compares the performance on the Arthur performance scale and on the Stanford-Binet test of groups described as normal, delinquent, feeble-minded, white, and Mexican. In each group the mean performance quotient was higher than the mean IQ, the difference being greatest in the case of the feeble-minded. Variability was also greater in the case of the PQ. The Mexicans, except among the delinquents, did not lower the group means for the IQ or PQ. 42% of the normal subjects scored on one test within 5 points of their score on the other, while of the feeble-minded Mexicans only 23% did. The PQ-IQ correlation coefficients ranged for the various groups between .63 and .66. Since low correlation exists and the probable error of estimate for both instruments is high, it is clear that performance on one test will not accurately predict performance on the other. It is suggested that the two instruments should supplement each other.—*H. L. Koch* (Chicago).

3308. **Lehrer, L.** ["Intelligent" children.] *Unser Schul*, 1934, 4, No. 3, 3-6.—A semi-popular discussion of what is meant by "intelligence."—*D. Shakow* (Worcester State Hospital).

3309. **Richey, A.** The effects of diseased tonsils and adenoids on intelligence quotients of 204 children. *J. Juv. Res.*, 1934, 18, 1-4.—The conclusions of the study are based on a comparison of the test performance of three groups of children: (1) those who had diseased tonsils and adenoids (100); (2) those whose naso-pharyngeal condition was reported as satisfactory (204); and (3) those who had had their tonsils and adenoids removed (104). A before-and-after-operation comparison was also made, the individuals needing but receiving no attention serving as a control. A matching technique was employed

in the selection of the groups, consideration being given in the pairing procedure to such variables as sex, age, IQ on first test, race, and general physical condition. It is concluded that the investigation failed to reveal any effect upon IQ of the presence or removal of diseased tonsils and adenoids.—*H. L. Koch* (Chicago).

3310. **Rosca, A.** Cercetari asupra inteligentii. (Researches on intelligence.) Cluj: Tipografia Nationala, 1929. Pp. 16. Lei 20.—A scale for the measurement of the intelligence of children between 4 and 14 years is elaborated. It is used as a means of distinction of feeble-minded from normal children.—*N. Margineanu* (Chicago).

3311. **Smith, G. M.** Group factors in mental tests similar in material or in structure. *Arch. of Psychol.*, 1933, No. 156. Pp. 56.—With the purpose of determining whether the structure or form of a mental test may not be as important in the production of group factors as the material has been shown to be, fourteen tests, all but one of them difficult power tests, were given to 186 college students in an 8-hour testing program. The tests were arranged either in three material groups or in three structure groups. Application of the simple tetrad criterion failed to give convincing evidence of a third-order or fourth-order group factor in any group of four or five objectively similar variables. The use of directed mean tetrads gave clear evidence of first-order group factors between pairs of tests similar either in material or in structure, material similarity being the more important. Using Hotelling's method of principal components, evidence suggesting second-order group factors in groups of tests similar in material or in structure was found. Material similarity was more influential than structural similarity. This new technique revealed the presence of an important general factor running through all fourteen tests, which was better measured by the spatial and numerical test groups than by the verbal group.—*E. M. Achilles* (Columbia).

3312. **Thorndike, E. L.** Unity or purity in traits and tests. *Occupations*, 1934, 12, No. 8, 57-59.—The writer discusses the procedures and precautions desirable in the selection or construction of tests such that whatever is measured by the tests is homogeneous. Although theoretically we may never assume that a trait is unitary, "in practice, however, if the intercorrelations among a set of particular abilities, attitudes, etc., are very high, so that the community of causation very greatly outweighs the diversities, the latter may be neglected." This is true only when the intercorrelations are known. "An ability or trait that is unitary to ordinary observation may have a composite causation, and a very definite and unitary cause may, under different conditions (i.e., in cooperation with other causes), be hidden in many very diverse abilities or traits as observed and scored," so that "the safe procedure is not to assume what the total score of a group of tests or items measures but to observe their intercorrelations."—*R. H. Brown* (Clark).

[See also abstract 3247.]

CHILDHOOD AND ADOLESCENCE

3313. Abe, M. *Jido seishin-eisei-gaku*. (Mental hygiene of children.) Tokyo: Dobunkwan, 1933. Pp. 184. Y. 1.20.—Contents: Introduction. (1) Heredity. (2) Environment. (3) Education. (4) Character and temperament. (5) Mental growth of children. (6) Supernormal children. (7) Inferior children. (8) Education and treatment of backward children. (9) Bodily illness having a close relation with mental hygiene.—R. Kuroda (Keijo).

3314. Christie, A. Physical defects in delinquent boys. *J. Juv. Res.*, 1934, 18, 13-22.—The author compares, with respect to such physical disabilities as a thorough physical examination reveals, 282 unselected boys from a junior high school and 282 consecutive cases examined at the San Francisco Juvenile Detention Home. In the case of almost every item, cardiac disease being the exception, the incidence of difficulty was greater among the delinquents than among the normal boys. Concerning the nature of the relation of physical disabilities as such to delinquency the author draws no conclusion.—H. L. Koch (Chicago).

3315. Dehn, G. *Proletarische Jugend. Lebensgestaltung und Gedankenwelt der grossstädtische Proletarierjugend*. (Proletarian youth. The life attitudes and thought world of proletarian youth in large cities.) Berlin: Furche Verl., 1933. Pp. 199. RM. 4.65.—R. R. Willoughby (Clark).

3316. Dennis, W. A description and classification of the responses of the newborn infant. *Psychol. Bull.*, 1934, 31, 5-22.—From 80 sources is gathered a classified list of nearly 100 responses, most of which are localized in some degree and many of which are total bodily responses that are patterned to form distinguishable totals.—J. F. Dashiell (North Carolina).

3317. Dupérié, R., & Bargues, R. A propos des réflexes inconditionnels du nourrisson: le réflexe de l'étreinte de Moro. (Concerning unconditioned reflexes in the infant: the embracing reflex of Moro.) *Gaz. hebdomadaire des sciences médicales de Bordeaux*, 1932, 53, No. 5, Jan. 31.—If an infant is subjected to any sudden form of excitation (jars, extensive warm or cold stimulation, sudden changes of position) except sounds or lights, the arms open and describe an arc of a circle—an embracing reaction. The authors have found this reflex of Moro in every infant less than 3 months of age, with a maximum in the first 6 weeks. It disappears during the 4th or 5th month. The absence of the reflex in the first weeks is found in congenital debilities and meningeal hemorrhages. Abnormal persistence occurs in encephalopathy, hydrocephaly, mongolism, and arrests of mental development.—(Courtesy *Année psychol.*)

3318. Fisher, M. L. Measured differences between problem and non-problem children in a public school system. *J. Educ. Sociol.*, 1934, 7, 353-364.—All the teachers in a school system of 6,737 pupils reported the names of all the problem children in their classes. The 360 children so reported were compared with an equal number of their non-problem

classmates. An extensive battery of standardized tests showed the non-problem group to be superior in intellectual and social traits, in home background, emotional adjustment, socio-economic status, and physical fitness. However, the most reliable differences were found in the tests of social and emotional adjustment. It was further demonstrated that the social and emotional traits apparent at kindergarten age tend to persist through the succeeding school years.—F. D. McTeer (Wayne University, Detroit).

3319. Friedmann, A. Über das Minderwertigkeitsgefühl phantasievoller Kinder. (On the feeling of inferiority in imaginative children.) *Zsch. f. päd. Psychol.*, 1932, 33, 273-293.—The author has assembled observations from various authors on children who have created and maintained imaginary persons over a period of time. She adds personal observations, and the cases altogether show that this imaginative creation coincides generally with an event arousing a feeling of inferiority in the child (the birth of a brother or sister, change of environment or separation from the parents).—(Courtesy *Année psychol.*)

3320. Furfey, P. H. On the specificity of certain types of behavior. *Psychol. Bull.*, 1933, 30, 693.—Abstract.—J. F. Dashiell (North Carolina).

3321. Grieger, M. *Nachuntersuchungen über kriminelle und asoziale Jugendliche*. (Follow-up investigations on criminal and asocial adolescents.) Berlin: de Gruyter, 1932. Pp. 15.—R. R. Willoughby (Clark).

3322. Hardy, M. C. An appraisal of social adjustments of elementary school pupils. *Psychol. Bull.*, 1933, 30, 694-695.—Abstract.—J. F. Dashiell (North Carolina).

3323. Hurlock, E. B. Experimental investigations of childhood play. *Psychol. Bull.*, 1934, 31, 47-66.—This review of 128 titles is not limited to experimental studies in the narrowest sense; and it organizes the material on the basis of age-periods in play—although disagreement among writers as to these periods is acknowledged.—J. F. Dashiell (North Carolina).

3324. Jersild, A. T. A study of children's fears. *Psychol. Bull.*, 1933, 30, 682-683.—Abstract.—J. F. Dashiell (North Carolina).

3325. Jones, V. Influence of three types of training and certain other factors upon the moral behavior of children. *Psychol. Bull.*, 1933, 30, 695-696.—Abstract.—J. F. Dashiell (North Carolina).

3326. Katz, R. *Gemeinschaftsleben verschieden-sprachiger Kinder*. (Social life of children of different languages.) *Zsch. f. Kinderforsch.*, 1933, 42, 321-364.—A seven-year-old American boy who knew no German came with his parents to Rostock, Germany, and remained ten months. Katz made detailed records of the social contacts which the little boy had with German children, including her own two little boys in her home, the children of the neighborhood, and those in kindergarten. She found that very young children tend to be unaware of the language difference, but play together, each speaking his own

language. Proletarian children do not recognize a foreign language as such. Children who know more than one language have more insight and arrive more easily at mutual understanding, even though they may not know a word of the language of the foreign child they are playing with. The child who is creatively striving for social contact seeks and finds ways of making himself understood. Root relationship between the two languages used is helpful in expediting mutual understanding. A strongly motor child learns the language of the natives. He needs few words to participate in their games.—*M. F. Martin* (West Springfield, Mass.)

3327. Koch, H. L. An analysis of certain forms of so-called nervous habits in young children. *Psychol. Bull.*, 1933, 30, 683.—Abstract.—*J. F. Dashiell* (North Carolina).

3328. Legrun, A. Wie und was "schreiben" Kindergartenkinder? (How and what kindergarten pupils "write.") *Zsch. f. päd. Psychol.*, 1932, 33, 322-331.—A sample collection of writings by children told to ask Santa Claus for Christmas presents. At the first stage, entirely incoherent marks are noticed, then flowing lines in a horizontal direction, then a great profusion of waves and zigzags, and finally the appearance of letters and figures.—(Courtesy *Année psychol.*)

3329. Leuba, C. Rivalry in young children. *Psychol. Bull.*, 1933, 30, 694.—Abstract.—*J. F. Dashiell* (North Carolina).

3330. Marzi, A. Sulle attitudini eidetiche visive nei bambini normali. (Concerning visual eidetic aptitudes in normal children.) *Scritti onore Kiesow*, 1933, 168-177.—The author examined 150 children of both sexes, aged 8-11 years. The final tests were made by Jaensch's method for consecutive images and with the method of graphic reproduction for unknown symbols (letters from the Hebrew alphabet). None of the children had consecutive positive images. They only gave fairly faithful graphic reproductions. Six of the subjects were aided by mnemonic and rational devices in their reproduction. There was no evidence of a conservation of a visual image. Only one girl of 8 years appeared to be an eidetic type as defined by Kiesow.—*R. Calabresi* (Rome).

3331. McElwee, E. W. Seymour, a boy with 192 IQ. *J. Juv. Res.*, 1934, 18, 28-35.—*H. L. Koch* (Chicago).

3332. McGraw, M. B. The effect of practice during infancy upon the development of specific behavior traits. *Psychol. Bull.*, 1933, 30, 681-682.—Abstract.—*J. F. Dashiell* (North Carolina).

3333. Morgenthaler, W. Psychologische Fragen der Säuglingsschwester und des Wochenbettes. (The psychological problem of the foster child and of confinement.) Berlin: Huber, 1932. Pp. 78. RM. 2.00.—*R. R. Willoughby* (Clark).

3334. Nenclares, F. Esquema metodológico de la adolescencia. (Methodological schema of adolescence.) *Arch. de neurobiol.*, 1934, 8, 487-492.—Anatomical data is not in itself sufficient for the study

of adolescence. Rather the physical and physiological data must merge with a psychological understanding in a comprehensive scheme of the mental development of the adolescent. The psychological knowledge must include the freedom of the individual to choose, and an interpretation of forces of a sexual nature. The essence of such knowledge "is intuitively given and not deduced."—*R. M. Bellows* (Ohio State).

3335. Partridge, E. D. A study of friendships among adolescent boys. *J. Genet. Psychol.*, 1933, 43, 472-477.—When permitted to select their own groups in summer camp, boys showed a tendency to pick others of their own chronological age, and further, of their own mental age. When listing their best friends they name boys nearer to themselves in mental than in chronological age.—*J. F. Dashiell* (North Carolina).

3336. Paset, G. Some drawings of men and women made by children of certain non-European races. *J. Roy. Anthropol. Inst.*, 1932, 62, 127-144.—The author has assembled more than 60,000 drawings by children of various races and civilizations, and the 70 specimens which he publishes show their general characteristics. In all races children's drawing begins with intellectual realism, which is replaced by visual realism, more or less rapidly, according to the environment. It seems that the margin of variability, more or less large in some regions, is extremely limited in others, which show for a given type sometimes a predilection, sometimes a total aversion.—(Courtesy *Année psychol.*)

3337. Peters, W. Einige Sondervorgänge in der geistigen Entwicklung. (Some particular phenomena in mental development.) *Zsch. f. päd. Psychol.*, 1932, 33, 193-198.—The author deals with the inequality of mental development in various fields. Techniques already acquired on one plane (for example, on the plane of spontaneous language) may have to be reacquired on a different plane (for example, in the description of images). Sometimes the techniques acquired seem to be entirely lost, and on the same plane regression occurs. For a stage already attained in a given plane, there is sometimes alternate usage of old and recent acquisitions.—(Courtesy *Année psychol.*)

3338. Platt, W. Temperament and disposition revealed in young children's music. *Character & Personality*, 1934, 2, 246-251.—The music of very young children has spontaneity, purpose and symmetry, and if it is the reproduction of tones heard it is almost invariably correctly pitched. Descending fourths, as *do* to *sol*, and descending major thirds, as *mi* to *do*, are the most common first two-note cadences, but the octave may come less frequently. Tunes may be dreamy, with languorous rhythms, or they may be active. Ten childish tunes are illustrated and discussed briefly.—*M. O. Wilson* (Oklahoma).

3339. Reynolds, M. M., & Mallay, H. The sleep of young children. *J. Genet. Psychol.*, 1933, 43, 322-351.—34 children between the ages of 17 and 62 months were observed for six-week periods. The

total sleep decreased with age, the means being lower than had been previously assumed to be desirable. In one of the six-week periods the more favorable environmental conditions induced more sleep. Daily fluctuations in total sleep were considerable, but when compared in longer time units the totals showed an acceptable constancy. The authors raise the question whether the physiological drive for sleep has not been previously somewhat under-emphasized, and external conditions over-emphasized.—J. F. Dashiell (North Carolina).

3340. Richards, T. W., & Irwin, O. C. Experimental methods used in studies on infant reactions since 1900. *Psychol. Bull.*, 1934, 31, 23-46.—From 117 sources a summary is made of experimental techniques that are objective in character, as contrasted with biographies, case histories, etc.—J. F. Dashiell (North Carolina).

3341. Rieti, E. Le attitudini eidetiche visive nei bambini ammalati di mente. (Visual eidetic tendencies in children afflicted with mental diseases.) *Scritti onore Kiesow*, 1933, 16-26.—By the method of graphic reproduction and Kiesow's tables the author studied 26 children afflicted with mental disorders, the intelligence development of whom was lower and the degree of instability higher than in retarded pupils. He found a very high percentage of eidetic children, viz., 46.15% (57.69% including the doubtful cases). Mono-eidetic tendencies were rarer, being found in 50% of the eidetic children (23.08% of all the subjects). The girls gave a higher percentage of eidetics than the boys. No conclusions can be formulated regarding the relationship between the eidetic manifestations and the age of the children. In regard to scholarship it appears that the children with higher eidetic tendencies were the better students. No relationship between the eidetic tendency and diagnosis could be determined.—R. Calabresi (Rome).

3342. Ripin, R. A comparative study of the development of infants in an institution with those in homes of low socio-economic status. *Psychol. Bull.*, 1933, 30, 680-681.—Abstract.—J. F. Dashiell (North Carolina).

3343. Schmeing, K. Ideal und Minusideal in der jugendlichen Entwicklung. (Socially positive and negative ideals in the development of children.) *Indus. Psychotechn.*, 1933, 10, 381-382.—In a questionnaire study of the opinions of 1083 school children between 9 and 20 years of age, it was shown that social philosophy is as often negative as positive. Girls are more strongly influenced by the family and restricted environments than are boys. Unemployment, sickness, and social position most definitely bring about negative goals.—H. J. P. Schubert (Buffalo).

3344. Seeman, E. Development of the pictorial aptitude in children. *Character & Personality*, 1934, 2, 209-221.—From the standpoint of innate artistic genius the sequence in the growth of drawing activities is about the same, but the time factor is different, the child with no genius progressing slowly and the

one with marked ability progressing rapidly. A rich artistic environment in early childhood stimulates the unfolding of the graphic abilities. Development of the artistic ability of 100 American children (18 months to 7 years) is compared with that of 100 Chinese children (same age). There is much similarity in the development of this ability in children the world over, but it does vary with degree of genius, racial culture and immediate environmental conditions.—M. O. Wilson (Oklahoma).

3345. Skeel, M. S. A motor scale for young children. *Psychol. Bull.*, 1933, 30, 682.—Abstract.—J. F. Dashiell (North Carolina).

3346. Smith, M. E. A study of language development in bilingual children in Hawaii. *Psychol. Bull.*, 1933, 30, 692-693.—Abstract.—J. F. Dashiell (North Carolina).

3347. Snyder, L. M. The problem child in the Jersey City elementary schools. *J. Educ. Sociol.*, 1934, 7, 343-352.—Out of 13,632 pupils in eleven different schools 829 children (6.9%) were reported by their teachers as problem children. The highest percentages of problem children were found in those schools which were predominantly colored (12.7%) or of foreign extraction (8.1%). The greatest number of problems were to be found in the fifth and sixth grades. Boys made up 83% of the total number of problem children reported. A detailed comparison of 264 of these problem children with an equal number of their non-problem classmates showed the problem children to be poorer in school deportment, less stable emotionally, less intelligent, and more over-age for their school grade, and to have home backgrounds which were less conducive to personality adjustment. No difference was found between the two groups in socio-economic status.—F. D. McTeer (Wayne University, Detroit).

3348. Stagner, R. The role of parents in the development of emotional instability. *Psychol. Bull.*, 1933, 30, 696-697.—Abstract.—J. F. Dashiell (North Carolina).

3349. Stray, H. F. Leadership traits of girls in girls' camps. *Sociol. & Soc. Res.*, 1934, 18, 240-250.—Information obtained from questionnaires sent to thirty camp directors on the Pacific Coast, and from personal observations of the writer, showed certain traits of leadership in camp life to be important. In order of rating, these traits stood: (1) health and vitality, (2) loyalty, (3) enthusiasm, (4) sportmanship, (5) skill and versatility, (6) organizing ability, (7) tact, (8) imagination, (9) sense of humor, (10) initiative, (11) poise, (12) originality, (13) sympathy.—J. R. Hilgard (Stanford).

3350. Stern, E. Kind und Tod. (The child and death.) *Zsch. f. Kinderforsch.*, 1933, 41, 221-240.—It is less of an emotional shock, upon subsequent bereavement, if the child becomes aware of the reality of death, of the distinction between living and non-living, through suitable preparation by occasional reference to the subject on the part of the elders rather than through inadequate and frightening references

heard in the school and outside the home.—K. C. Pratt (Michigan Central State Teachers College).

3351. Stuart, H. C. *Healthy childhood*. New York: Appleton-Century, 1933. Pp. 393.—This book makes available to parents material gathered by the White House Conference on Child Health and Protection relative to the physical welfare of the child. Following an account of the child health movement and the accomplishments of modern medicine in safeguarding children's health the author treats the problems concerned with preparation for parenthood and the life of the mother during pregnancy. The growth of the fetus is traced from conception to birth. The general trends in physical development after birth are then discussed, and this is followed by a detailed account of the major organs of the body, the skeleton, and posture. The functions of different parts of the body, their development, and possible disorders are considered, and advice is given with respect to special hygienic measures to insure proper development or to correct undesirable trends already present. The principles of nutrition and their application to problems of diet and feeding are presented. The essentials of a balanced diet, the planning of meals, the nursing of infants, and the proper scheduling of feeding are covered. Further material deals with rest and exercise. Normal sleep requirements, conditions demanding added rest, balanced programs of activity and rest, and dangers of fatigue are considered. Infections and immunity are fully discussed and suggestions for preventing and for treating infectious diseases are given. Supplementing this are discussions of factors making for a safe and healthy environment for children and information concerning the avoidance and the treatment of accidents. An appendix describing the symptoms, effects, and treatment of children's diseases is included. Training and treatment which take account of individual differences rather than specific rules are stressed by the author.—K. W. Braly (Minnesota).

3352. Walton, W. E. *Empathic responses in children*. *Psychol. Bull.*, 1933, 30, 677-678.—Abstract.—J. F. Dashiell (North Carolina).

3353. Washburn, R. W., & Hilgard, J. R. An objective method of recording the social behavior of young children. *Psychol. Bull.*, 1933, 30, 693.—Abstract.—J. F. Dashiell (North Carolina).

3354. Weiss, LaB. A. *Differential variations in the activity of new born infants*. *Psychol. Bull.*, 1933, 30, 680.—Abstract.—J. F. Dashiell (North Carolina).

3355. Williams, H. D. *A survey of pre-delinquent school children of ten midwestern cities*. *J. Educ. Sociol.*, 1934, 7, 365-370.—The percentages given in this study are based on the report of 1,343 problem children out of a school population of 55,995 children in ten midwestern cities. Of this pre-delinquent group 80.2% are boys; ages 13 and 14 are most productive of problems, as is the fifth grade; more than half of these problem children have IQ's between 70 and 100; 61% are irregular in school attendance; 77% have defective home conditions, and 46% have physical abnormalities. The problems most frequently listed

are "annoys other children" and "general disobedience."—F. D. McTeer (Wayne University, Detroit).

3356. Williams, H. M. *A study in the prediction of motor rhythmic performance of school children*. *J. Genet. Psychol.*, 1933, 43, 377-388.—The Sievers motor rhythm test with minor changes was repeated after a 15-month interval on 100 children aged six to twelve years. Wide individual differences were found, also increases with age, but in decreasing amounts. While the reliability of the test at one sitting was .85, over the interval it was .74—indicating that repetition of the complete test with identical series should bring to light consistent individual differences and hence make predictions possible. Two variations in apparatus for testing motor rhythm are described.—J. F. Dashiell (North Carolina).

3357. Witty, P. A. *The physical, mental, and social growth and development of three hundred "only" children of chronological age five*. *Psychol. Bull.*, 1933, 30, 694.—Abstract.—J. F. Dashiell (North Carolina).

3358. Woodcock, I. G. *Thumb sucking*. *Med. Rec.*, 1934, 139, 328-330.—Though masturbation and thumb sucking have long been considered concomitant habits, there now seems to be a swing toward the belief that sucking habits do not necessarily have any sexual implications. Sucking of thumbs, fingers, lips, tongue, pacifiers, etc., are all considered in the same category, and the physiology and etiology of these habits are described. Pathological conditions resulting therefrom are chiefly colic and flatulence induced by air ingestion, and curvature of the spine resulting from toe sucking. Likewise such other conditions are described as diseased tonsils and adenoids and hypertrophy of the lymphoid tissue, and it is shown how sucking habits tend to inhibit the growth and development of the superficial and underlying tissues of the oral cavity, thus resulting in asymmetry and disharmony of facial development. Sucking problems must be analytically considered before treatment can be instituted.—L. S. Selling (Institute for Juvenile Research).

3359. Zillig, M. *Beliebte und unbeliebte Volksschülerinnen*. (School girls, liked and disliked by their classmates.) *Indus. Psychotechn.*, 1933, 10, 378-379.—A study was made of the factors which made for a child's being liked or disliked and the effects of such approval or disapproval. Good social background, school ability, pleasing appearance, intelligence, and good fellowship tended to make a child liked. No single factor guaranteed being approved. The very much liked child possessed a combination of the above factors. Likeable children were chosen as leaders. Disliked children were forced out of group activities. As this reaction of other people was found to be constant throughout the school period, being liked or disliked at this age probably affects the individual's character for life.—H. J. P. Schubert (Buffalo).

[See also abstracts 2941, 2945, 2988, 3143, 3168, 3219, 3254, 3275.]

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